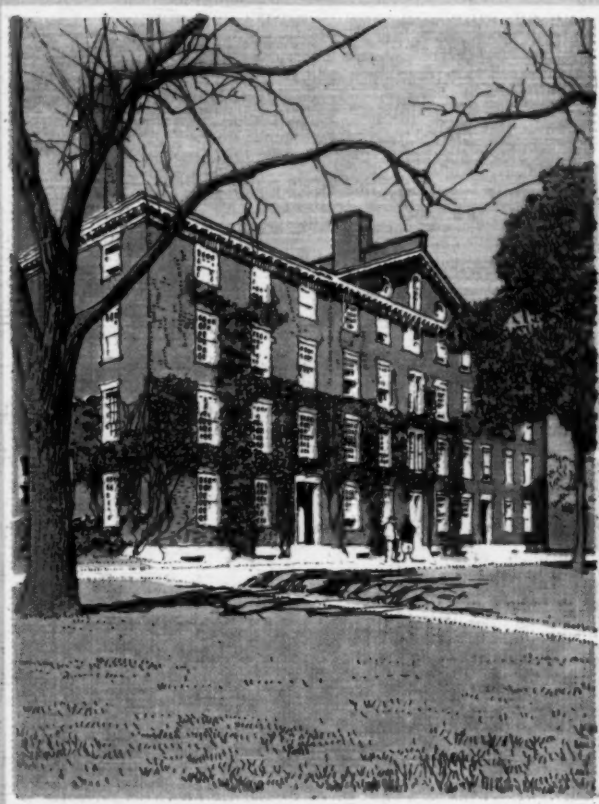


JAN 2 1926

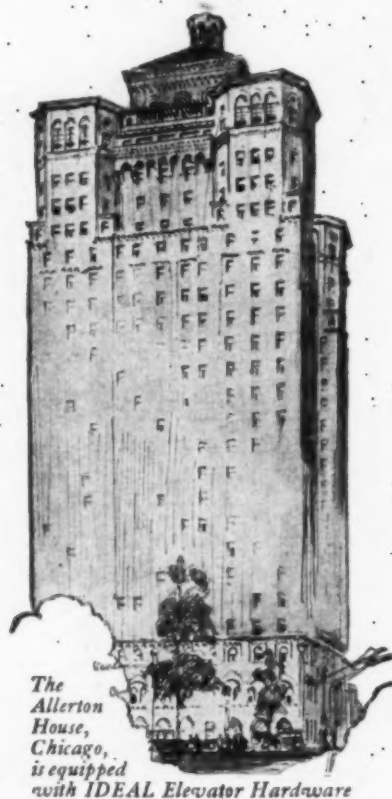
THE ARCHITECTURAL FORUM



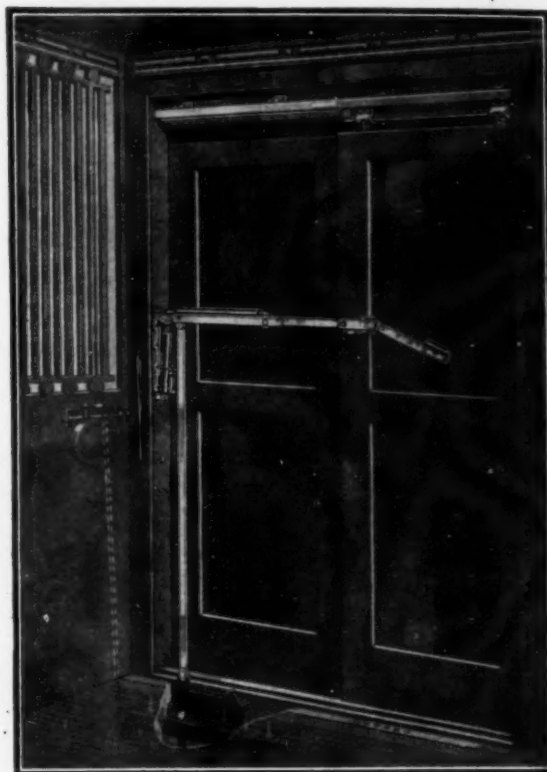
DECEMBER 1925

UNIVERSITY BUILDINGS REFERENCE NUMBER—PART I

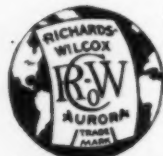
PRICE \$2



The Allerton House, Chicago, is equipped with IDEAL Elevator Hardware



Vigilant Guard of the Elevator Shaft



"Quality leaves its imprint!"

Back of the R-W Trade-mark

is an organization functioning in the interest of every architect, contractor and builder throughout the country. R-W *Ideal* Elevator Door Hardware is a type of the character of all R-W products. R-W hangers for every door that slides—house, barn, fire, industrial—represent the same supreme regard for perfect craftsmanship—enduring satisfaction. Without obligation to you the Engineering Department lends its cooperation. Perhaps you want something special—or are debating what to use. This Department will advise you correctly out of its experience. Write them.

Elevator Doors are the sentinels of the shaft. They must always be on the job. Elevator Doors equipped with R-W *Ideal* Elevator Hardware operate with positive, certain, safe swiftness. Silently they open—as silently close, instantly responsive to the hand and will of the operator. Nor can they remain open the fraction of an inch if further equipped with R-W *Ideal* electric or mechanical interlocks. In its entirety, the perfection of safety with speed. Made for single-speed, two-speed, three-speed doors; doors in pairs, operating from both sides; combination swing-out doors. Send for catalog.

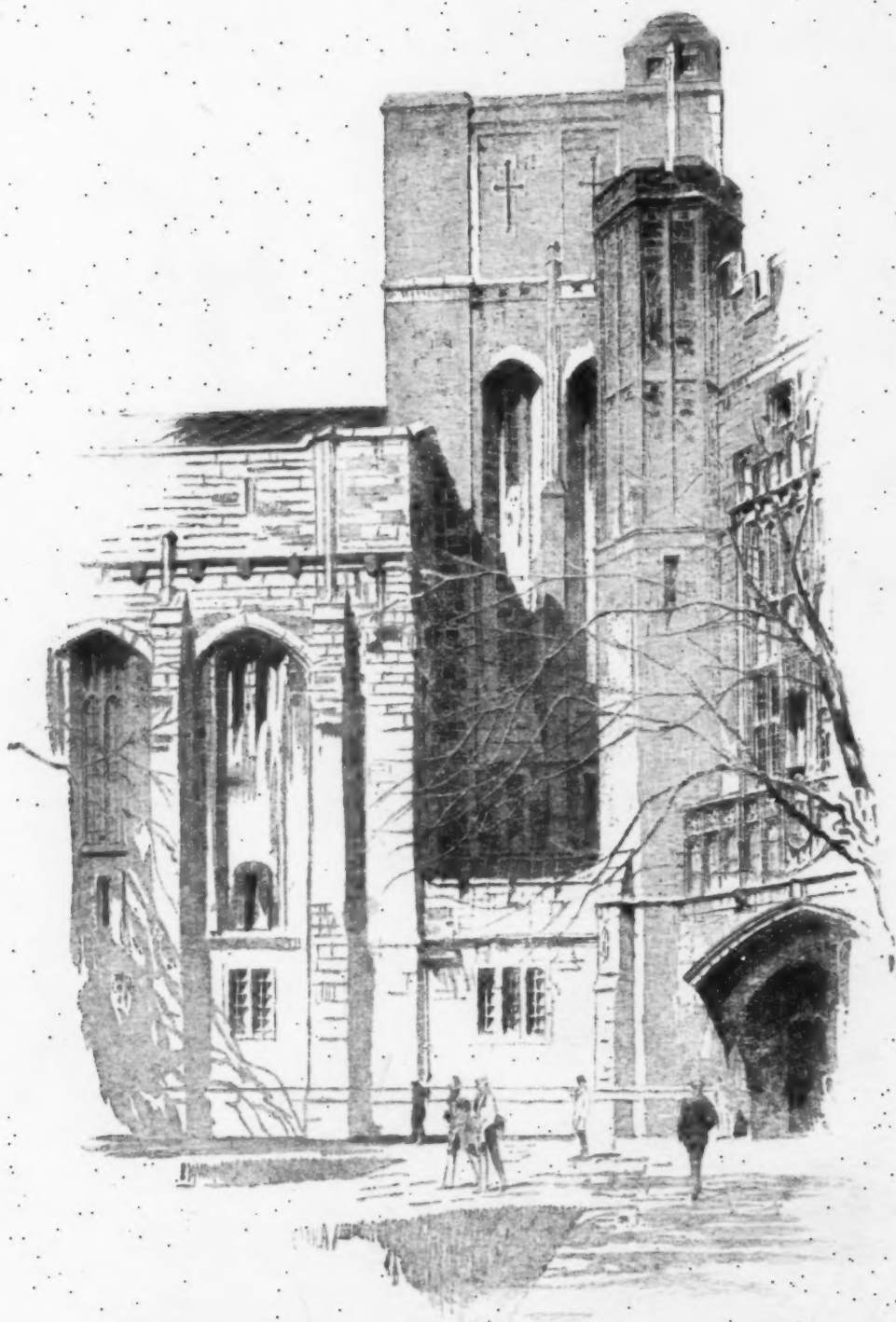
Richards-Wilcox Mfg. Co.

"A Hanger for any Door that Slides."

AURORA, ILLINOIS, U.S.A.

New York Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans
Chicago Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

Architectural



STUDY FOR GYMNASIUM, YALE UNIVERSITY.

JOHN RUSSELL POPE, ARCHITECT

From a pencil drawing by Otto R. Eggers

The Architectural Forum

The ARCHITECTURAL FORUM

VOLUME XLIII

DECEMBER 1925

NUMBER 6

✓ The Educational Influence of Collegiate Architecture

By A. D. F. HAMLIN

Professor of Architecture, Columbia University.

IF the philosophy of the necessitarians is correct, human character and achievement are determined by heredity and environment. Either of these factors may dominate the other, or they may act conjointly to produce the criminal or the saint, the hero or the coward, the millionaire or the spendthrift. Whether we accept this philosophy to the exclusion of free will and moral responsibility or not, it is impossible to deny that the circumstances and material environments of life do exercise a powerful influence on human careers. So far as this philosophy is sound, all efforts to create a favorable environment for human beings are rational and creditable aids to social betterment. The gradual elimination of the slums of great cities by provision of comfortable housing must in the long run tend to the reduction of crime and of the misery which helps to produce crime.

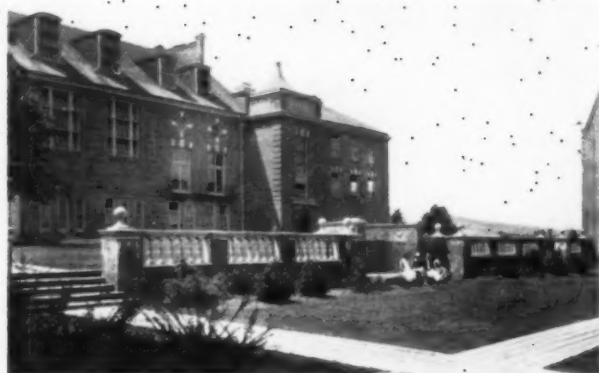
Just how far and in what way the changed environment provided by such public enterprises actually affects the public morals is a question not easy to determine. It is unfortunately true that even the splendid park system of Chicago has not reformed the habits of the criminal underworld of that city. Probably the members of that underworld do not frequent the parks except for anti-social purposes, and amid a thousand other environmental conditions favoring crime one has no right to expect any reformatory influence from grass and trees, lake front and free baths sufficient to overcome these untoward influences. A bad heredity would alone be sufficient to counteract all the sanative influences of better housing, free baths and lovely parks. Yet it may well be that if an entire generation were to grow up under these influences, and if at the same time courts and juries and legislators, city officials and state governments became wise, humane and incorruptible, cities even like Chicago and New York might in time be freed from the terrible incubus of vast criminal underworlds, while an improved heredity would, in a later generation, carry still further the deliverance of large cities from organized crime.

The constituent elements of one's environment are too many and complex for any complete or accurate evaluation of the influence of any one of them upon

character. In order to make any such evaluation, one must know the factors of the problem, which is impossible. No two men respond exactly alike to the same environment. Good music powerfully affects some natures; others are strongly influenced by motion pictures. The beauty of a fine landscape stirs one man; another finds uplift in the stir and movement of the city streets. A shiftless family in a charming house will soon reduce its charm to the disreputable shabbiness of their own characters,—which shows that sometimes it is character that shapes its new environment instead of the reverse!

In cities and populous towns the greater part of one's life is passed in and among buildings. The houses we live in; the schools in which we study, the churches in which we worship, the shops we frequent, and the edifices in which we work constitute the most constant and inescapable factors of our material environment. They are the products and exponents of our culture, and they exert an inescapable, if generally unperceived, influence in our lives and tastes. The public taste determines their architecture, and in return they react on the public taste! The architecture of Paris is both the product and the nursery of the Parisian artistic taste. The architecture of a great city is both the product and the nursery of its culture.

I was present at the opening of the Columbian Exposition at Chicago, 32 years ago. It was the first time that the hundreds of thousands who thronged it had ever seen great monumental architecture in a beautiful setting. What impressed me on the opening day was the expression of joy, of overflowing happiness, in the bustling crowds. They had never before moved amid such splendors of architecture and gardening, and in spite of all the inconveniences, hustle, and bustle, they were happy and showed it in their faces and talk. The architecture, the music and the flowers, all ministered to their sense of festival gaiety. I was then and there convinced that a beautiful architectural environment could become a potent factor in the morale of a community. Four years later Columbia University moved from its picturesque but cramped home in Anglo-Gothic brick buildings on 49th Street to its present site fronting



Women's Building and Gymnasium, University of Oregon, Eugene, Ore.
E. F. Laurence, Architect

116th Street. Shortly after the occupation of this site, as one of the editors of the *Columbia University Quarterly*, I commented in one of its issues on the probable influence of the architecture of the new home of the University on the student body. I drew attention to the noble South Court, with its superb stairs of approach, to the imposing Ionic facade of the Low Library, to the majestic beauty of the interior of that great building, and to the dignity and solidity of the academic buildings and their equipment. It seemed to me then that such an environment could not fail to make some impress on student life and character; that rowdiness and student vulgarity and the blatant silliness of undergraduate life would find here a rather sterile soil for their nurture. I think my expectations have been justified. There has been marvelously little of the vulgar disfigurement of interiors, of rowdiness within the walls, such as one too often hears of in colleges housed in ugly and shabby buildings. The dignity and fine finish and maintenance of the buildings lend themselves to rational and decent behavior within them. Whether the experience of other finely-housed universities has been of the same sort I do not know. I can only "speak that I do know, and testify that I have seen."

II

THE improvement in the architecture of our American colleges and universities during the past 25 or 30 years is abundantly evidenced in this issue of *THE ARCHITECTURAL FORUM*. It is precisely what one would expect in view of the general advance in American architecture during the same period. The trustees of our colleges, in spite of all the criticism leveled at them by educators and students, surely represent, on the whole, the higher levels of culture, education and taste of the communities they represent, and they have behind them both the stimulus and the criticism of large and influential bodies of alumni. The huge benefactions poured into the treasuries which they administer testify to the general confidence and respect which they enjoy. It is of course open to debate whether these benefactions have or have not been too largely devoted to buildings rather than to educational endowments,

and there are those who go so far as to lament the increasing architectural splendor of our educational buildings, as subtracting unduly from the endowments for salaries, equipment and research. I do not propose to debate this question. Mark Hopkins sitting on one end of a log, teaching and inspiring a student sitting on the other end, as the ideal of a college, constitutes a figure of speech, not a practicable program of education. For there never were, and never will be, enough Mark Hopkinses to go around, and the modern college student demands something more than to listen to anyone's preaching! The days are gone in which a man "read law" with the village lawyer, for admission to the bar, or "read divinity" and Hebrew with his old pastor as his chief preparation for the Christian ministry. The phases of knowledge, the kinds of mental experience required by the educated man of today have so enormously increased and become so diversified, that even the undergraduate college has been compelled to develop architecturally and into a highly complex institution, to provide housing for this complexity. Especially have the natural sciences made necessary a vastly increased equipment of teachers, classrooms, museums and laboratories, and now that appreciation of the Fine Arts is at last percolating into our undergraduate courses, it has been necessary to provide other special forms of equipment,—lecture rooms, art collections and galleries. The development of libraries and of their use for study and research, even in undergraduate colleges, has been phenomenal. As I look back over 50 years of graduate life, the provision for use of the library, alike in Amherst where I was graduated and in Columbia where I began teaching in 1883, was so meager as to be absolutely ridiculous. Amherst now has a library building which cost a quarter of a million, and Columbia a library which cost very nearly a million, and these libraries are thronged all day and every day. Meanwhile, the steady increase in the student population has more than kept pace with the increasing diversity of the courses they pursue, and has added new dormitories, commons halls, student-club houses and fraternity buildings to the architectural environment of the college student. Athletics have become also so important an element in the college life, and in many cases in the curriculum, that every college worthy the name has had to add to its buildings gymnasiums, swimming pools and athletic fields, and in the larger institutions stadiums or "bowls."

The result of all these changes in the college life, curriculum and activities has been to produce an architectural environment which can only be compared to that of the great mediæval monasteries of France and Italy, like Monte Cassino and Clairvaux. Whereas in former and simpler days a college could get along very well with a chapel, a small library, a building for recitations, and two or three dormitories, fronting upon or scattered about a spacious open campus, today no college can thrive or even function without a considerable number and variety

of special buildings. In some cases this necessity has been availed of to produce a homogeneous and imposing group, and to give the students a beautiful and inspiring architectural environment. In others (and alas too many cases!) the opportunity to produce such an environment has been frittered away by the lack of foresight and of large views of the opportunity. The shortsighted trustees have thereby cast away a potent means of influencing their students in the direction of good taste and of sound morale, for however subtle and imponderable such an influence may be, and however unconscious the student of its action upon him, the influence is there, and it operates silently and unperceived through all the four or more years of his residence. However unrealized by himself, it tends to form many of his ideas of art and life which influence his character.

III

THE average American college student is probably somewhat opaque to the penetration of the rays of purely æsthetic influences; he is generally sadly ignorant of both the history and the technic of the Fine Arts; he is a good deal of a Philistine; but that he is impervious to every æsthetic influence I do not believe. Consciously or unconsciously, he reacts to his environment.

Two years ago, rambling through the deserted and silent courts of Eton College in the summer holidays, I became interested in the hundreds of memorial tablets on the walls of the cloister or arcade of the main quadrangle. Most of them commemorated Etonians who had laid down their lives in the Great War. Among them I found one which so attracted my attention that I copied it. It read thus: "In Memory of: Harry Richard: Deirghton: Simpson: Lt. 6th. (Inniskilling): Dragoons Att. R. F. C.: An American Boy: of Infinite Daring: Who returned: for Love of Eton: to help England: In November 1914: but was killed: after almost 2 years: of continuous Service: While testing a new machine, on Dec. 1916: *Etonam Nactus: Exornavit: Floreat Etona.*" "For love of Eton!" Why did this American lad so love Eton as to return to help England in her struggle against the Hun? Doubtless for many reasons; the pull of many and various ties of sentiment; memories of college days, of rosy-cheeked English lads with whom he had played cricket on Eton's grassy field, of friendly teachers and happy hours; all of these helped to form his love of Eton College. But no-one can visit those fine old cloisters and the beautiful College chapel without realizing, to some degree at least, the potency of the spell which that rare environment must weave about all its frequenters, and which lasts as long as life itself!

If an American lad could be drawn from across the seas to lay down his life "for love of Eton" how potent must have been the spell wrought through four centuries by the now venerable halls and cloisters of Oxford and Cambridge! However familiar and commonplace they may have become to the under-



The Library of Columbia University, New York
McKim, Mead & White, Architects

graduate, rushing from lecture or quiz by his don to the river or cricket field, and even to the fellows and dons and tutors in their old halls, the quiet and century-old beauty of those ancient "quads," of their broad gate towers, mullioned windows and crenelated parapets could not fail to become inwoven with the fabric of the lives of men who haunted them. These fine old halls, so dignified, so free from meretricious gewgaws and architectural faldread, so quiet and restful in form and color, must have wrought their spell into the lives of their inmates, unconsciously rather than consciously, because they were an essential element in the scholastic environment of life. How instinctively the mention of Oxford as the Alma Mater of any great or near-great Englishman suggests to the mind of anyone who has been in Oxford the "quad" of Balliol or the tower of Magdalen, the ivy-clad walls of the "backs," the sturdy steeple and Spanish doorway of St. Mary's, and the sleepy shelf-lined halls of the Bodleian Library! And if Cambridge boasts less of the Tudor Gothic charm of Oxford, she has the glory of King's College Chapel, the stately courts of Clare and Caius,—"Keys" they call it—the fine dignity of Wren's Trinity Library and the eighteenth century quaintness of Emanuel's quadrangle. May one not possibly assign to the more modern aspect of the architecture of Cambridge at least a part of the subtle difference between the two traditions, with mathematics and science at Cambridge taking somewhat the place of classics and religious disputation at Oxford? Such an explanation seems to be reasonable.

In our own colleges and universities the development of a characteristic monumental architecture has been too recent to allow of broad generalizations such as those I have just suggested, but I believe somewhat similar results will manifest themselves as time grows older. Making all due allowance for the increasing complexity of modern life and the multiplicity of influences that play upon the undergraduate, and bearing in mind also the fact that the new college walls can for many years to come enshrine no such wealth of ancient tradition, can commemorate no such galaxies of genius as do the memorial tablets and storied windows of old English college

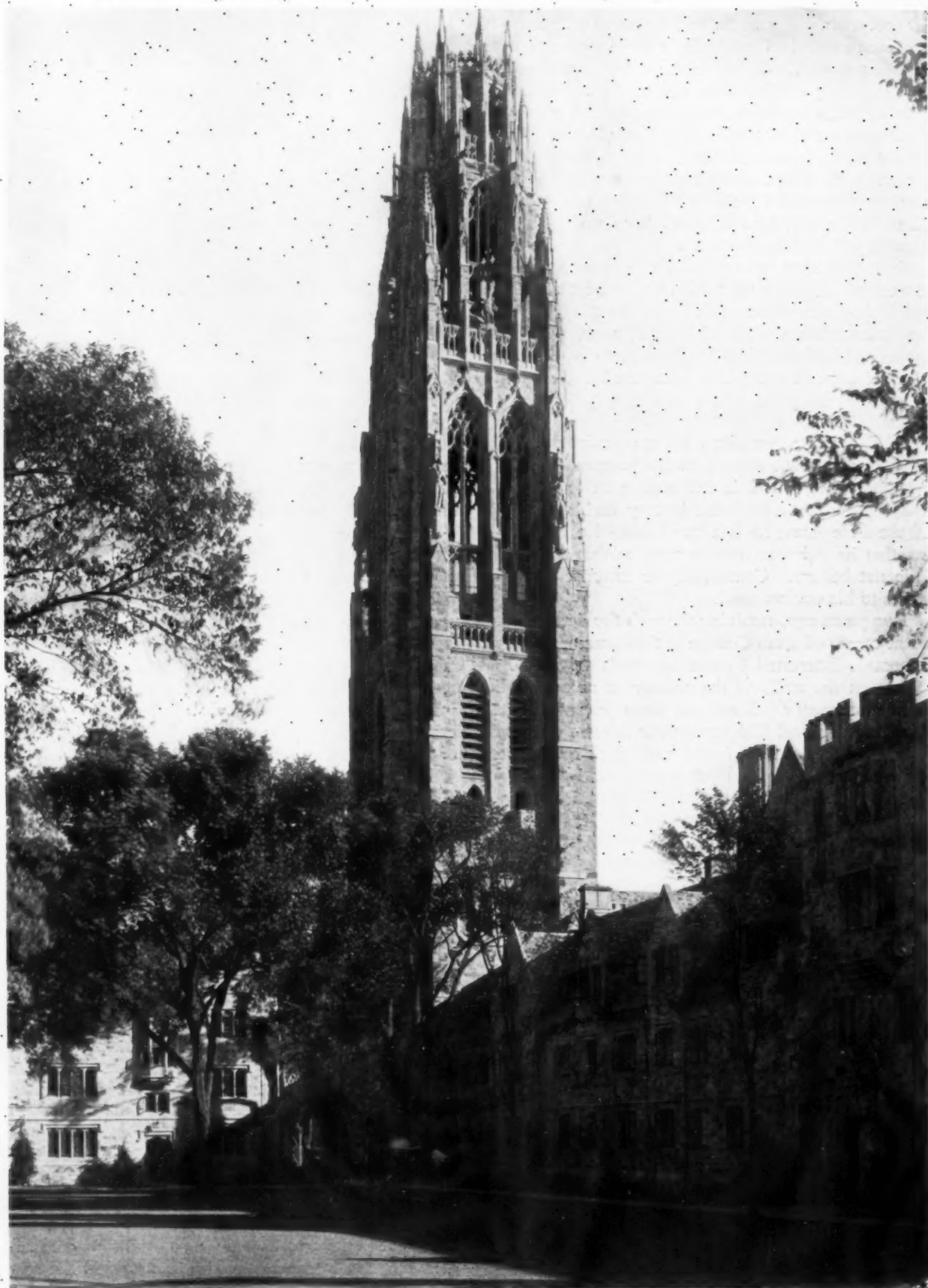


Photo. John Wallace Gillies

HARKNESS MEMORIAL QUADRANGLE, YALE UNIVERSITY, NEW HAVEN
JAMES GAMBLE ROGERS, ARCHITECT

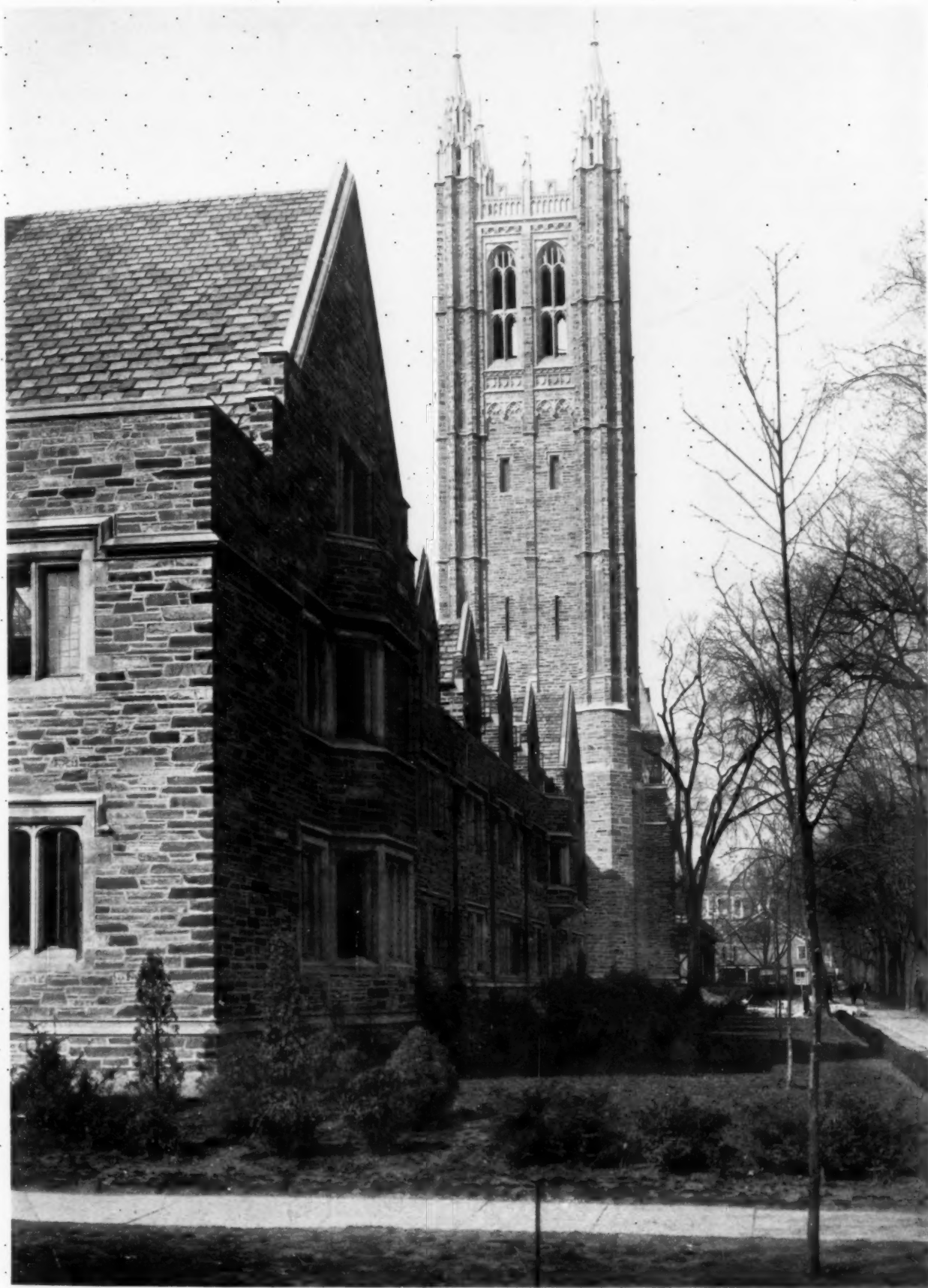


Photo., Rose & Son

HOLDER HALL, PRINCETON UNIVERSITY, PRINCETON, N. J.
DAY & KLAUDER, ARCHITECTS

halls and chapels, the new and finer environment of such college architecture as has been taking form at Princeton, Yale, Berkeley, Palo Alto, Philadelphia, Chicago, and Johns Hopkins, at Bryn Mawr and Vassar, must in the long run tell on the lives of the students who frequent them. To pass four years or more in their halls, to worship in their chapels, to be surrounded by monuments of good taste and to live in dormitories which are models of good planning, comfort and often of charm, can no more fail to influence the minds and tastes of their occupants for good than can base and tawdry, decrepit and filthy homes fail to discourage aspiration and debase the standards of life. As the general standards of well being and of the public taste advance,—and a backward look of 50 years to my own college days fills me with amazement at the change,—the college life should be environed with the evidences of that advance. In my day we drew all our water from the college well; carried up the coal for our stoves in coal scuttles from our private coal heaps behind the "dorms," swept our own rooms; filled our own kerosene lamps, and lived a life of almost Spartan simplicity. My sons in the same halls had modern plumbing, steam heat and electric lights. I have discovered in them no evidence of mental and moral anemia as the result of these fabulous luxuries of living!

The Princeton graduate student, living and working in Cram's fine group of the Graduate School on its hill apart, can hardly fail to contribute to the evolution of a type distinctly different from that of the Columbia graduate student, dwelling generally in a lodging apart from the University, in the heart of the throbbing life and activities of a huge city. The two types may very probably become in time even more widely differentiated than those of the Oxford and Cambridge graduates! And it is well that there should be a different sort of environment for different types of aspirants to advanced scholarship, just as there are different types of homes for different sorts of people throughout the country. And precisely the same sort of differentiation, though with a narrower range of variation, is developing and is desirable in our higher institutions of learning. It is the glory of our American higher education that it is not controlled by any supreme federal authority. Standardization has become a sort of fetish in many American minds. But the Great War has at least demonstrated to Americans the futility of trying to centralize control and unify methods in any activity under any super-authority, federal or other. Only in mechanical industries, and therein not by super-control but by mutual agreement, has standardization produced desirable results. The human mind in these days refuses to be bound by external authority, and in our vast domain with its hundred million souls, our nation can measure up to its opportunities and responsibilities only by allowing free play to the mind, by encouraging, not by fettering, those differences of mind and taste that develop in various communities under differences of climate, resources and

environment. Only thus is real liberty to be attained.

We shall never develop any uniform or even predominant style of collegiate architecture. The architectural contrast between Palo Alto and Columbia, between Harvard and Princeton, between Amherst and Chicago, is surely no mere accident, but expresses differences of taste or spirit, of ideals or purpose in the institutions themselves. The distinct architectural environment provided by each different type may in the long run tend to emphasize subtle differences in the spirit and tastes of its students. It would be foolish to attempt to push this idea too far. The architectural character of each group is not a mould into which each student mind must be poured, and differences of style which to the architect are obvious, may be wholly unperceived by the student. It will never be possible to distinguish by any difference of learning or character the alumnus of a college housed in a Gothic group from one graduated from a college of Colonial architecture. All that one can say is that the more susceptible the student is to aesthetic impressions and to his material surroundings, the more readily will his character and taste react to his material and artistic environment, and that the more his environment lends itself to efficient teaching, serene concentration and a life undisturbed by discomforts the more efficiently will the student's mind function, the more favorable will be his reaction to surroundings, and the more firmly grounded his taste.

IV

ONE of the finest ministries of American religious culture to the world has been the splendid group of colleges established by American liberality in less favored lands,—in Turkey, China, Japan, Bulgaria, and elsewhere. Housed in fine buildings of American design, though often in the local or national style, they represent thoroughly modern ideas of construction and equipment. To the complaint that these buildings are "too fine" for their communities, that students born and bred in a different and less sophisticated atmosphere would by the elegance, the comforts and conveniences of these schools be spoiled for life among their people, the answer has been given by more than a half-century of experience. Instead of being sophisticated and spoiled by education in surrounding so different from and superior to those of their home life, their graduates have become more patriotic than ever, going forth fired with a zeal to pass on their betterment to their less fortunate compatriots, raising the general standard of living in their home communities. These colleges are potent in commending the American people to foreign communities, and both directly and through their graduates, to whom these buildings have been a revelation of American Christian ideals and standards, the architecture of these colleges is constantly and silently exerting an influence for civilization, culture and international friendship. Wherever they exist, America is regarded as a home and source of beneficent and friendly influence to all.

The Planning of Dormitories

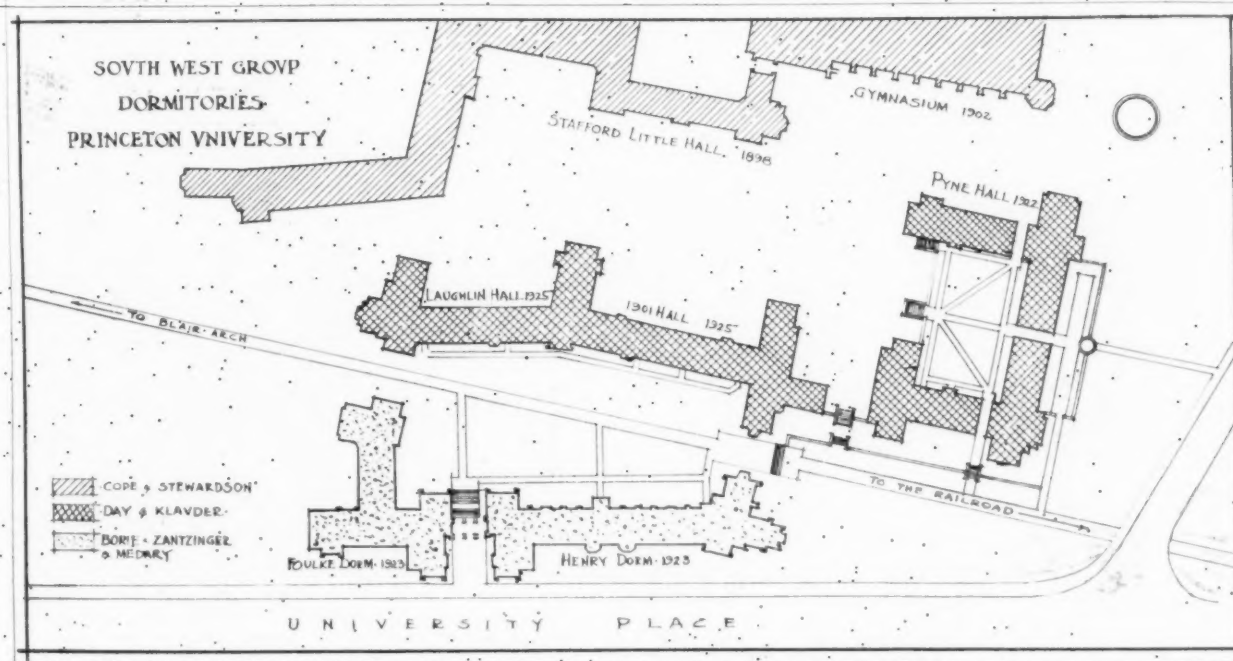
By ROBERT McLAUGHLIN

IN the days before the Revolution, when everyone who attended the College of New Jersey lived in "Nassau Hall," there occurred a battle between students and faculty in which the students bolted their doors against the faculty and declared war. Nowadays the younger instructors and professors live in the dormitories with the students, and their doors as well as those of the undergraduates are not bolted. This change in mood has been paralleled by a change in architecture. The long, bare corridors of "Nassau Hall" have been given over to the University offices, and the undergraduate now lives in one of the attractive residences that form the subject of this article. It is a pleasing picture,—these low, informal dormitories clustering about and enclosing the great Chapel, Library and Laboratories, that are the heart of the University. Completing the picture is still in process. In spite of valiant efforts to limit the enrollment and a constant building of dormitories, four hundred students still room off the campus.

The Development. "Blair Hall," built in 1896, is the oldest of this group and the first Princeton building to be built in the collegiate Gothic style. In the early nineteenth century several massive buildings of classic proportions had been grouped about "Nassau Hall," which for almost 50 years housed the entire College. The 'seventies and 'eighties produced a small but choice collection of romantic revivalisms. 1896 was the year of Princeton's sesqui-centennial, and the construction of "Blair Hall" may be said to

mark the beginnings of her renaissance in architecture. It is natural for a renaissance to disregard what is obvious and perhaps indigenous for something usually distant in time and often remote in space. Hunt's Byzantine and Potter's Romanesque were abandoned, not for the middle Colonial of "Nassau Hall," but for the Gothic of Oxford and Cambridge. No doubt a battle of the styles raged at the time, and occasional shots are still taken at Princeton's departure from her native style. But that departure was made, and there has been no swerving from the chosen road. While most other universities have been experimenting, Princeton has been adding to her architectural setting without the discordant notes of abandoned trials of different types of architecture.

Cope & Stewardson followed "Blair" with "Little" and the Gymnasium. These buildings, which then bounded the campus on the west, form a continuous line of English Gothic that turns and doubles in plan, with a roof in line that breaks up into towers and falls away with the contours of the land. It is only the recent group, built since 1921, that has reached beyond this limit. Benjamin Wistar Morris built "'79 Hall" in 1904, using a red brick that affords a pleasing variation from the local stone of other recent dormitories. "Patton Hall" is also the work of Mr. Morris, but here the nice balance of a carefully studied design was destroyed when the building committee substituted a coarse stone for that indicated on the drawings. Ralph Adams Gram, who was appointed supervising architect to the



Ground Plans of Southwest Dormitory Group, Princeton University



Looking Toward Blair Arch, New Dormitory Group,
Princeton University

University in 1908, built "Campbell Hall," which eventually will be joined to "Blair," once the intervening astronomical observatory has outlived its usefulness. This is the only undergraduate dormitory that Mr. Cram has built, and here he was restrained by the fact that he was making an extension of an older building. His Graduate College, which ten years of occupancy have proved to be satisfactory practically and increasingly satisfying aesthetically, is located apart from the rest of the University. The simple charm of Day & Klauder's "Holder" and "Hamilton Courts" constitutes a foil to the dazzling

brilliance of their Dining Halls. "Cuyler Hall" is joined to the north end of "Patton," with its semi-court terminating the long stretch of the older buildings. It is a clever piece of planning, possessing its own charm as an architectural unit while fulfilling its obligations as part of a greater whole.

The Plan of the New Group. The new group of dormitories now awaits only the finishing of a small unit to attain completion. It is located outside the old campus boundary formed by the Cope & Stewardson buildings, and includes them in its ensemble. It occupies the site of the old railroad station and tracks that were removed in 1918 after the building of a new station to the south. With the branch railroad from the Junction running up past the Gymnasium and "Little," a great portal was built in "Blair" to form a gateway to the campus. Blair Arch is all that might be expected of such an entrance. It rises out of and is itself part of the dormitory; it has dignity without being monumental to a forced degree. The impression, as one mounts the steps, is perfect. The weight of the great portal is a little stern; one is about to be cut off from this outer universe of jangling trains and cities. Then appear through the arch the old buildings of Princeton and the trees, and the belfry of "Old North." One has come into the world of the University, with its peace and quiet. Now the architects who laid out the plan for these



Entrance Gateway, Blair Hall, Princeton University
Cope & Stewardson, Architects

new dormitories doubtless felt all this, but perhaps they thought it involved simply an architectural effect. At any rate, they decided to retain the importance of Blair tower, and struck an axis from the tower to the railroad station, a distance of a quarter of a mile. This axis makes a pleasing image on paper, and axes have their place in expositions where placing a great midway is a legitimate striving for effect, or in a park where sheer sweep of vista is sought. But a university is a place somewhat apart from the rest of the world, where men spend a few years of their lives in associations, in study, and occasionally in quiet. This great, open gap is beautifully laid out and finely lined with undergraduate residences, to afford an imposing avenue for Princeton townspeople on their way to work in Trenton! This is the outcome of a striving for effect that architecture falls into once it becomes self-conscious and divorced from the natural processes which bring it into being. The thoroughfare has been justified to some by recalling a parallel from the middle ages. When walled towns outgrew their battlements, the new growth took place along the lines of the old roads that had led up to the gates. Likewise, it has been reasoned, since Princeton has outgrown the limits of "Little" and "Blair," the new developments should occur along the line of the now historic railroad. This is a choice bit of the sort of modern

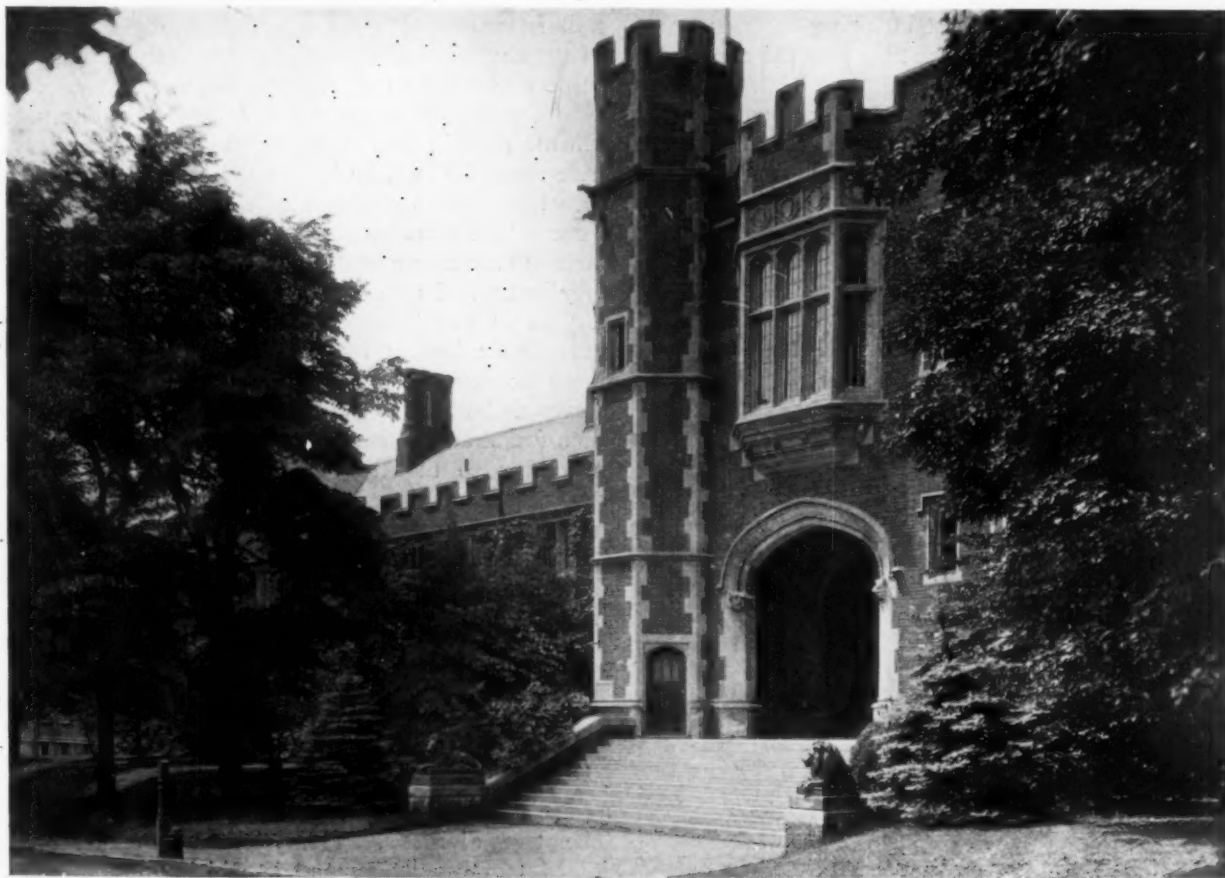


1901 Hall, Princeton University

Day & Klauder, Architects

mediaevalism that is accompanied by architectural artificiality. The beauty and distinction of Princeton can be better preserved by closing this open gap. Along the axis are arranged two groups of dormitories. Toward University Place are Zantzinger, Borie & Medary's "Henry" and "Foulke Halls"; on the opposite side are Day & Klauder's "Pyne" and "1901-Laughlin" dormitories. Both "Henry-Foulke" and "1901-Laughlin" are a story lower in height on their west sides than on the east, owing to a rise in ground from east to west which affects building.

The Planning of the Dormitories. There have



Entrance Detail, 1879 Hall, Princeton University

Benjamin Wistar Morris, Architect



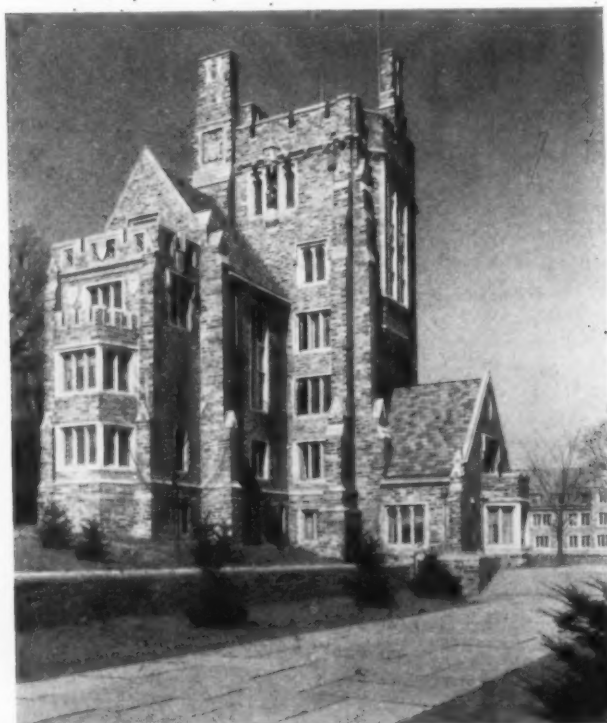
Cuyler Hall, Princeton University
Day & Klauder, Architects.

been two general schemes used in the Princeton dormitories. One plan provides for a two-and-a-half-story building, in which a suite of rooms flanks either side of the entry on each floor. The width of the building, about 35 feet including exterior walls, is fixed by the depth of the study plus the depth of a bedroom and closet. Since "Holder Hall" was finished in 1910 the cost of dormitory construction has increased from 35 cents per cubic foot to 79 cents in "1901-Laughlin" and 85 cents in "Foulke" and

"Henry." In order to maintain its policy of realizing from room rentals a return of 4 per cent on its investment, the University has been forced to build the new dormitories three and occasionally four and a half stories high. Mr. Klauder's ready acceptance of the challenge of economic needs has won him the respect and regard of his business associates. His plan for "1901-Laughlin Hall" shows an alternate scheme now in use. The width of the dormitory, here about 30 feet, is determined by the shorter dimensions of two studies plus the width of the corridor which runs between. In this plan study and bedroom are arranged on the same side of the dormitory instead of running the suite through the building as in the "Holder" plan. The "1901" plan necessitates having fewer entries, and is generally more economical. In some cases a single room serves as both study and sleeping quarters. It has been found advisable to connect pairs of these study-bedrooms so that they may be rented as double suites, each room serving as study and bedroom for two men. These dimensions are in general those of "1901-Laughlin," and are now usual for Princeton dormitories, and the volume of air in sleeping rooms is not less than 748 cubic feet per man:

Study-bedroom:	11 ft. x 15 ft., 6 ins.	= 170 sq. ft.
Double study:	11 " x 16 "	= 176 " "
Bedroom:	11 " x 7 " 6 "	= 82 " "

The Design of the New Dormitories. The southern end of "Henry-Foulke" builds up into a tower, — a pure *tour de force*, but effective from most angles. The two divisions, "Henry" and "Foulke," are joined together by an arcade which lines up with the end of Dickinson Street. Several lead statues fill niches in the building, and the detail is quite free and amply placed. A pronounced difference in scale is noticed between this work of Zantzinger, Borie & Medary.



End View, Henry Dormitory, Princeton University
Zantzinger, Borie & Medary, Architects



Another View of Cuyler Hall, Princeton University
Day & Klauder, Architects

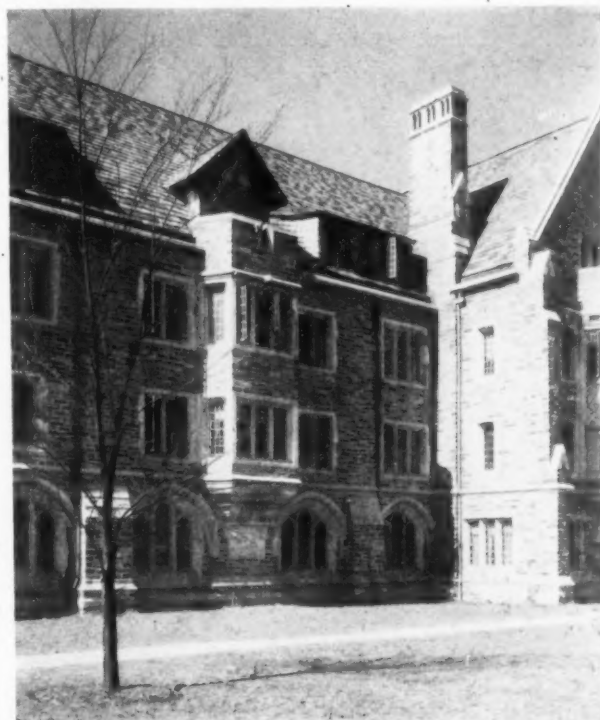
Medary and that of Day & Klauder, the detail of the former firm being considerably larger than the latter's.

Of Day & Klauder's two most recent Princeton dormitories, one was finished in 1922 and the other is just being completed. The first, "Pyne Hall," was built when the University felt an extreme need for rooms that could be rented at low prices. Mr. Klauder's broken roof line was straightened out to the unbroken run that we now see. The detail was cut down to almost a minimum. Doubtless this did not afford Mr. Klauder the most pleasing opportunity, for we remember his ideas about Gothic's being the style of variety and surprise in contrast with the quiet and peace of Classic design. But what Mr. Klauder can do with an unbroken wall surface, purely through study of proportions and openings, is shown in the facade of "1901-Laughlin Hall."

Construction. Dormitory construction has changed considerably during the last 30 years. "Blair" and "Little" are of Germantown stone. The limestone trim was cut by hand on the ground, due to a now obsolete belief that machine cutting "stunned" the face of the stone, causing a minute shattering of the structure so as to cause disintegration through frost. Princeton dormitories are now built of local stone with limestone trim. The stone is an argillite geologically evolved from a mud shale subjected to terrific pressure under water, thus giving the quarry many faces. The stone is laid up with a cut flush joint just as it comes from the quarry northeast of the town, without conscious arrangement of pattern. The trim of "Henry-Foulke" is in five distinct colors of Indiana limestone, running from buff to gray. The trim used for "1901 Hall" is variegated in shade, running between two limits of color values.

The floors of "Little" were constructed with two sets of joists, one set carrying the floor, the alter-

nate set, which was laid 2-inches lower, carrying the ceilings. This was an economical method of securing insulation against sound. In the fireproof construction of the recent dormitories, Zantzinger, Borie & Medary have specified a tin pan system for building floors, while Day & Klauder have used hollow tile with concrete joists. These latter systems have displaced use of the 5-inch slabs with wire mesh used in "Holder" and the Graduate College. Partitions are of hollow tile faced with rough plaster in which a



Facade Detail, One of Southwest Group Dormitories,
Princeton
Zantzinger, Borie & Medary, Architects

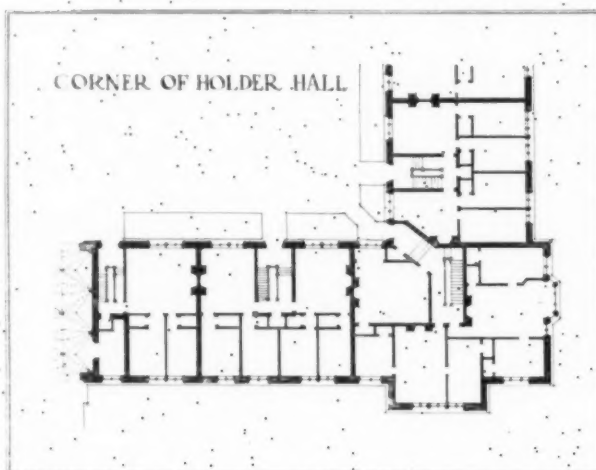
gray bar sand is mixed to give texture and a yellow sand used to give warmth of color. Stairs are fireproof, built of 4-inch concrete slabs reinforced, with simple iron railings set in the concrete. Roof rafters are of structural steel with 2-inch wood sheathing as a base for nailing the slates used for roofing.

The slate roofs of the group show considerable variation; on "Pyne Hall," Day & Klauder used a more varied range of colors than in their

earlier work. The roofs of "Henry" and "Foulke" show an even greater spotting of purple and brown, thus carrying out the more alive treatment of their surfaces. In "1901 Hall," Day & Klauder have reverted to a more restrained use of the darker shades than in "Pyne." The nice balance that produces both quiet and interest in this roof is an extremely subtle matter; and so a record of the formula may be valuable. The slate, with rough butts and sides, was furnished in these excellent proportions:

- 50 per cent unfading green;
- 25 per cent variegated green and purple;
- 25 per cent light and medium gray.

The pitch of the roof rafters is 50° 30' from the horizontal, and the slate was laid with diminishing courses according to this schedule commencing at the eaves always with the largest and heaviest slates:



Typical Floor Plan, Holder Hall, Princeton University

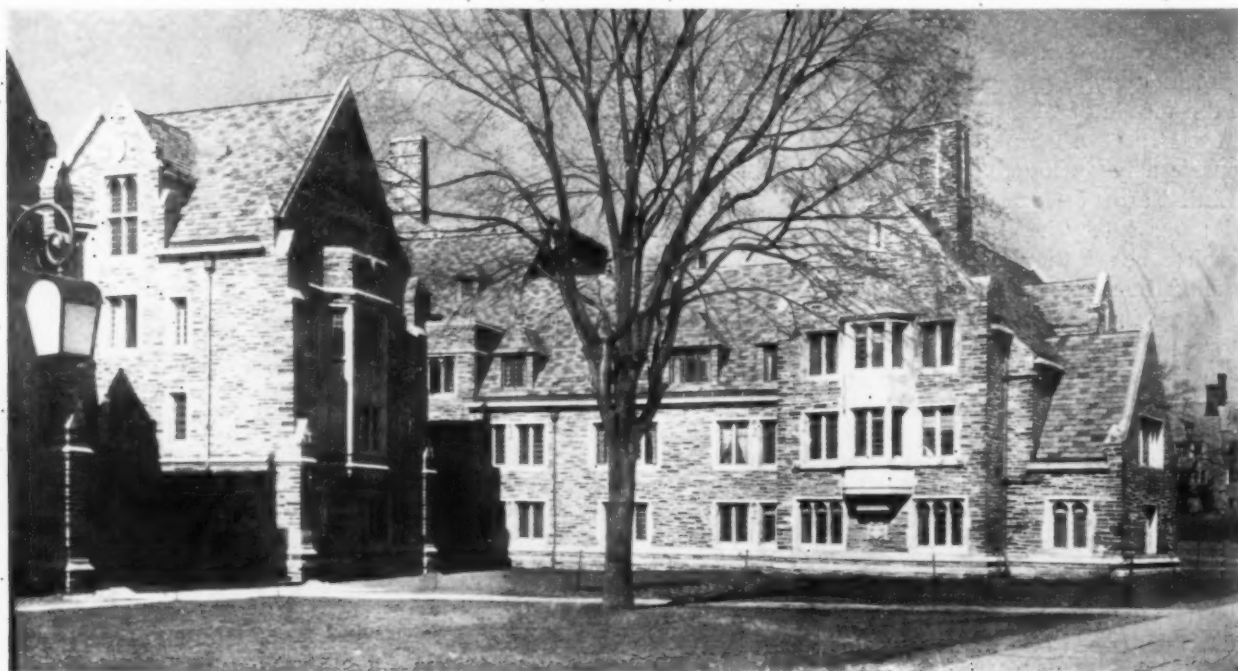
5 courses $\frac{3}{4}$ in. thick, weathering $10\frac{1}{2}$ ins.; 6 courses $\frac{5}{8}$ in. thick and weathering $9\frac{1}{2}$ ins.; 7 courses $\frac{5}{8}$ in. thick, weathering $8\frac{1}{2}$ ins.; 8 courses $\frac{1}{2}$ in. thick, and weathering $7\frac{1}{2}$ ins.; 6 courses $\frac{1}{2}$ in. thick, weathering $6\frac{1}{2}$ ins.; 5 courses $\frac{3}{8}$ in. thick and weathering $5\frac{1}{2}$ ins.

Back before the war the Philadelphia Chapter of the American Institute of Architects visited Princeton. As one of the results of the members' architectural pilgrimage, they

placed a tablet in "Blair Hall," beautifully designed and carved, to the memory of the architects of that building. A freshman, who evidently believed what he read, long held a high regard for the "Faia brothers" as the architects of the building. The tablet has been dedicated to WALTER COPE FAIA and JOHN STEWARDSON FAIA. He never knew quite how to pronounce the name of this fraternal firm, but we may be sure that during the four succeeding years he learned something of architecture.

Dormitory	Total Cost	Cost per Cu. Ft.
"1901-Laughlin"	\$550,000	79 cents
"Henry-Foulke"	600,000	85 "
"Pyne"	500,000	about 80 "

The cubic foot cost of "1901-Laughlin" does not include the heat connection from the power house, nor that of "Henry-Foulke" the connecting arches.



Foulke Dormitory, Princeton University
Zantzinger, Borie & Medary, Architects

Planning Gymnasiums

By AARON G. ALEXANDER

Of the Office of Hobart B. Upjohn, New York

IT seems only a few years ago that the only gymnasium in town was in the Y. M. C. A. Most of the high school winter athletics were practiced and played in the "Y" gymnasium, and I recall that in the public school I attended, I practiced basketball in an unfinished cellar. What a change has come over all this in a few short years! Today no school or college is complete without a gymnasium. It certainly is a wonderful institution, especially in the more crowded cities, and it has won its place in our life.

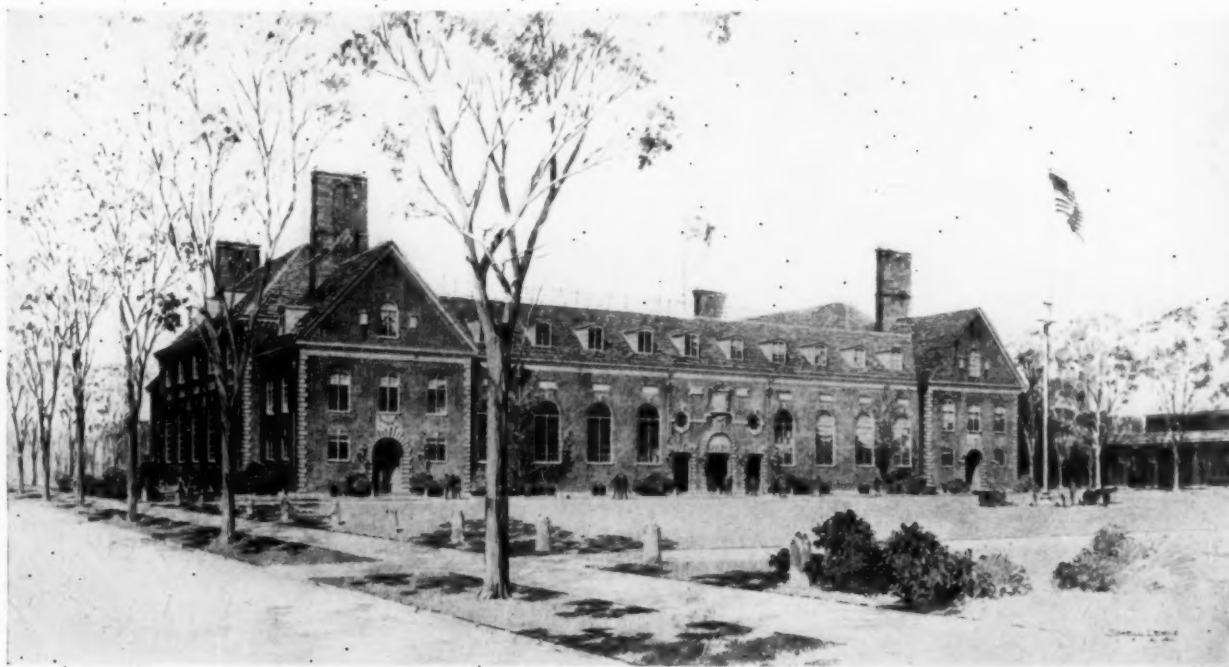
The problem of planning a gymnasium may seem at first to be rather easy,—just a gymnasium, locker rooms and pool. But when you consider the advance made in teaching athletics and the interest taken by the public in indoor sports, the problem seems to be of considerable size. The architect has to consider and advise on such items as organization; the gymnasium's class and location; auxiliary gymnasiums; pools, lockers, etc.; as well as on all the details of mechanical installation necessary to properly heat, light and ventilate each unit, and other matters.

Let us consider the requirements of a gymnasium for a college of approximately from 3000 to 4000 students. First as to organization, for usually a college of this size requires compulsory athletic training during one or two years of the course. This means regular athletic directors and assistants and quarters for them. In addition, there are all the "teams" such as those for basket ball, indoor baseball, handball, squash, football, rowing, water sports, etc. These require special rooms in some cases, as well as special coaches' and trainers' quarters and

separate complete quarters for visiting teams. When one considers all these, along with the main gymnasium not only large enough for standard games but of sufficient seating capacity to accommodate audiences large enough to sustain the athletics, one can soon realize that the architect has a real problem to solve in planning such an exacting building.

The physical director in charge, and his assistant, should not be located merely off the gymnasium, but should control the entrances to and the exits from the physical departments. The gymnasium, locker rooms, shower rooms and swimming pool constitute the main physical departments. The locker rooms and showers are generally located beneath the gymnasium, and the nearer to it the better. The locker rooms and baths are the most closely related of all departments, and each must be easily accessible from the other, and naturally under the heading of baths is included the swimming pool, which it is quite important should be easily accessible from the showers.

If possible, plan the pool partly *outside* the main building, so as to have a skylight over it. It has been demonstrated that a dark, poorly lighted pool will become filled with organic matter which infects water much more quickly than a well lighted pool. In addition to this skylight, have all the windows possible. The size of the pool is usually determined by the funds available. A pool 35 feet wide by 75 feet long is excellent for a college. This gives six 5-foot racing lanes, the two outside or end lanes on each side being 2 feet, 6 inches from the side, which is official for racing. The depths should be plainly marked in the



Perspective of Men's Gymnasium; University of Illinois, Urbana, Ill.
James M. White and Charles A. Platt, Architects



Gymnasium, Smith College,
Northampton, Mass.

J. W. Ames and E. S. Dodge, Architects

border, ranging from 3 feet, 6 inches, to 8 feet at the deepest part, which should be 12 feet from one end, with colors usually following those of the college. It is also a great saving to use a glazed brick wainscoting around the pool, since it can be built as part of the masonry walls. The pool should be situated a little off center of the room, so as to allow space for the spectators at one side and at the end, leaving a narrow end and side for the contestants. Under the wide end the filters, pumps, etc., can be economically placed, since the pool should never be just sunk in the ground but should have a trench all around it for pipes, etc. The specifications of the different materials to use for lining the pool and for its construction, filtration, etc., would fill a fair sized book, but suffice it to say that the usual lining is ceramic tile on waterproof concrete with tile overflow gutter and chemical filters, water being pumped into the pool by circulating pumps. There is a vacuum system for a pool for removing growth or sediment that accumulates at the bottom of the pool without emptying it. The shower room, which must be situated between



Gymnasium, North Carolina State College of
Agriculture, Raleigh, N. C.

Hobart B. Upjohn, Architect

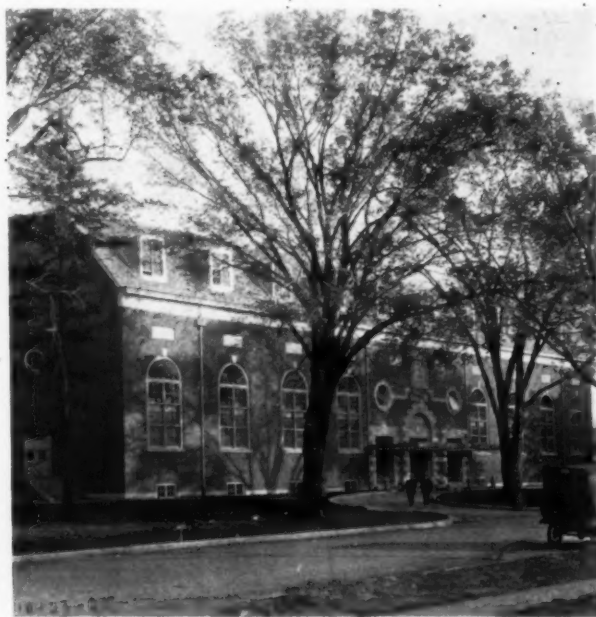
the pool and the locker rooms, should have its showers controlled by mixing valves, which should be under the direction of the physical director, who in this way is able to fix the proper temperatures of the water used. One or two cold water showers are generally installed, since they are almost certain to be called for.

The locker room offers, of course, the next problem, and it must be properly heated and ventilated. This department has received considerable thought of late because of the odors from the gymnasium clothes, which are anything but agreeable. The size of the locker room depends upon the system of the locker equipment adopted. The best and most efficient planning includes the provision of large lockers of a sufficient number to take care of the largest number of students that may use the gymnasium at one time. Provision must be made for both the incoming and the outgoing classes. In addition to the large lockers, there are often smaller lockers or drawers where the gymnasium suits of the students are kept. The student first goes to the small lockers, obtains his gymnasium suit, and then proceeds to the



Gymnasium, Manhattan College,
Riverdale-on-Hudson, N. Y.

James W. O'Connor, Architect



Men's Gymnasium, University of Illinois,
Urbana, Ill.

James M. White and Charles A. Platt, Architects



Millhiser Memorial Gymnasium, Richmond College,
Richmond, Va.
Cram & Ferguson, Architects

corresponding large locker and places his day clothes in it until he is through exercising. When he dresses, he replaces his gymnasium suit in the small locker, leaving the large locker for the next student. In this way as many as four or even six students can use one large locker, and the gymnasium suit, being kept separately, may be placed in another room, where it can be properly dried out. The latest system includes even a washing machine, so that the pupil is given a clean suit each time he uses the gymnasium, though giving this service is rare.

Usually the remainder of the lower floors of a gymnasium is given up to bowling alleys and storage facilities, as well as to visiting teams' quarters. The quarters of the visiting teams should, of course, contain rubbing rooms, dressing rooms, lockers and showers, all being complete units. If military training is given in the college, a large armory for the storage of military equipment is likely to be included on this floor. This armory is also useful for drilling.

The main gymnasium should be placed above the ground so as to receive all the light possible. The

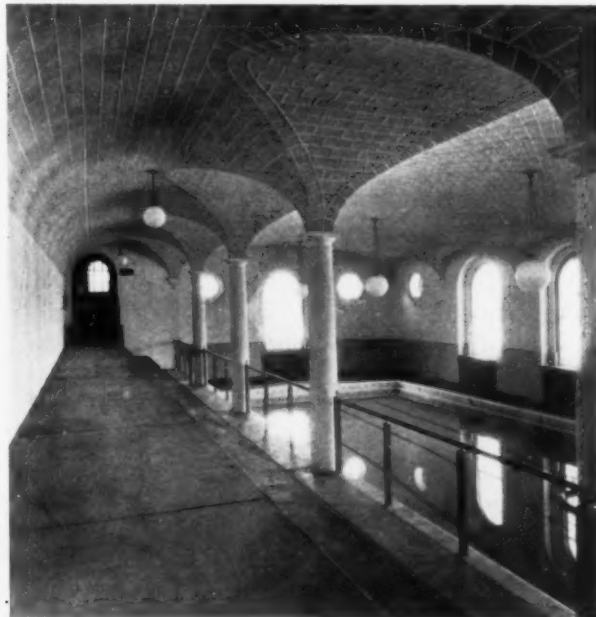


Yost Field House, University of Michigan,
Ann Arbor, Mich.
Smith, Hinchman & Grylls, Architects

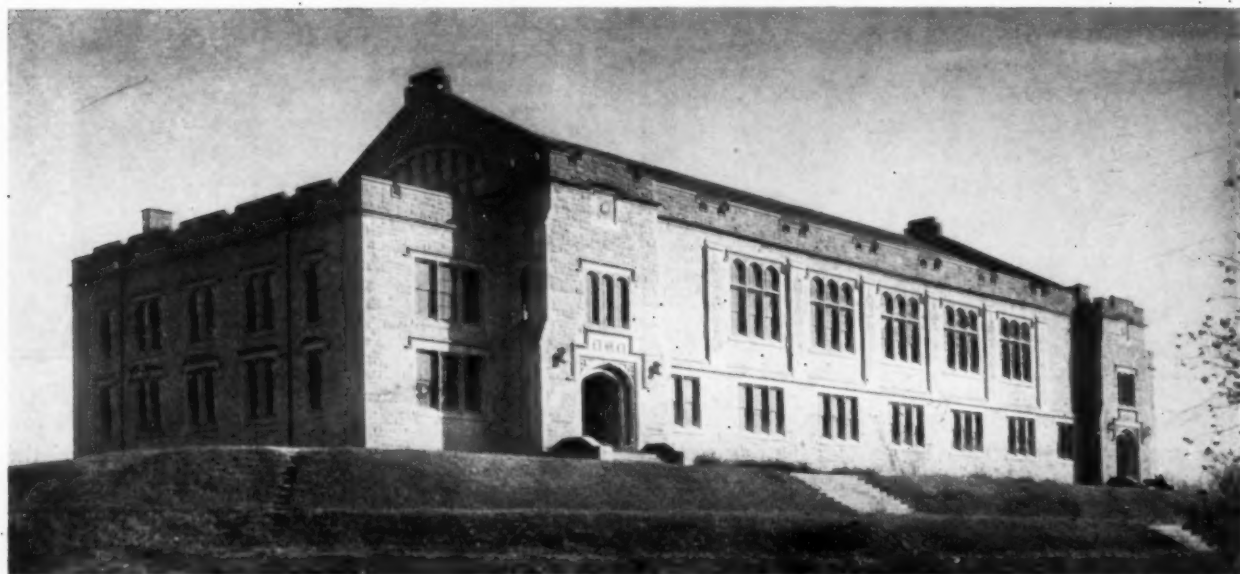
use of a skylight is advisable, as is also use of the largest windows that can be placed in the side walls. These windows must not be close to the floor of the gymnasium, because cross light on a playing court is not considered the best. The size of the gymnasium should not be determined so much by the number who will use it as by the character and the kinds of exercise which are to be taught and by the policy of the gymnasium's organization. Anything less than a 40 by 60 gymnasium is too small for standard indoor games. Most college gymnasiums have at least two practice standard baseball courts. The width of the main room should be approximately two-thirds its length. This shape usually serves best for the apparatus work; games and classes, as well as permitting the best design of a running track, if one is installed. For exercising, 45 square feet are generally allotted to each person. The height of the bottom of the trusses, to which apparatus may be hung, should never be less than 16 feet. This is the standard height for basket ball also. If a running track is installed, it is generally 12 feet above the



Gymnasium, Smith College, Northampton, Mass.
J. W. Ames and E. S. Dodge, Architects



Swimming Pool, Smith College Northampton, Mass.
J. W. Ames and E. S. Dodge, Architects



Gymnasium, University of Indiana, Bloomington, Ind.
R. P. Daggett & Co., Architects

floor, and is banked at the ends. Seating of spectators in the gymnasium is generally taken care of with collapsible bleacher seats. In heating a gymnasium it must be borne in mind that wall radiators, not less than 6 feet above the floor at the lowest point, are the best and that a temperature of from 62 to 65° Fahr. is preferable; also that change of air at the rate of 7,000 to 9,000 cubic feet per hour while classes are exercising, should be arranged for.

Provision of apparatus is a general problem for which architects have a lot of data, and this again is dependent upon the policy of the organization and

the views of the athletic directors. Many times provision of an auxiliary gymnasium, where special classes may be formed, is desirable. In this auxiliary gymnasium special apparatus can be installed for the development of certain branches of sport not indulged in by the majority of students, such as rowing, etc. Consideration should also be given in planning to the convenience of the spectator, and he should enter in such a way as to not interfere with any of the sports he is to view. This last mentioned detail is of particular importance, and it should be carefully studied by the architect of a gymnasium.



Club Room, Gymnasium, University of Indiana, Bloomington, Ind.
R. P. Daggett & Co., Architects

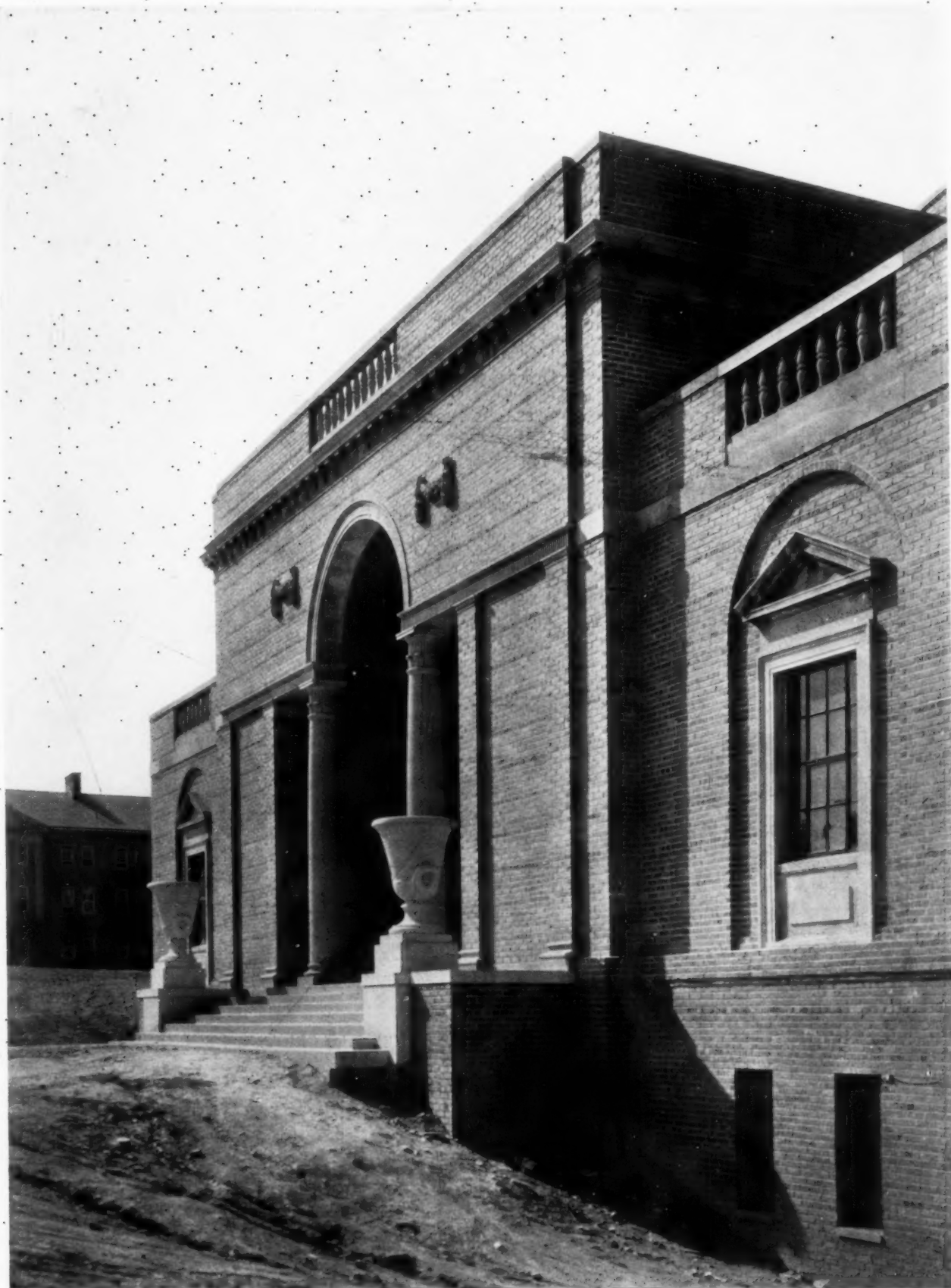


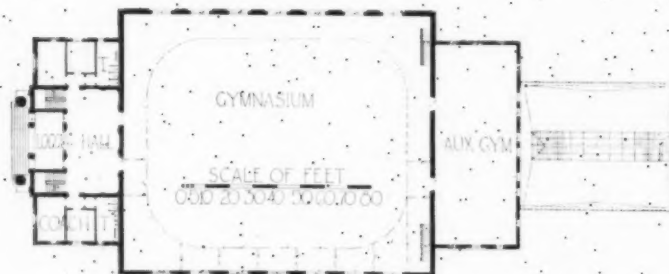
Photo. Tebbs & Knell, Inc.

Plans on Bark

ENTRANCE, GYMNASIUM
NORTH CAROLINA STATE COLLEGE OF AGRICULTURE, RALEIGH, N. C.,
HOBART B. UPJOHN, ARCHITECT



SECOND FLOOR



FIRST FLOOR



BASEMENT

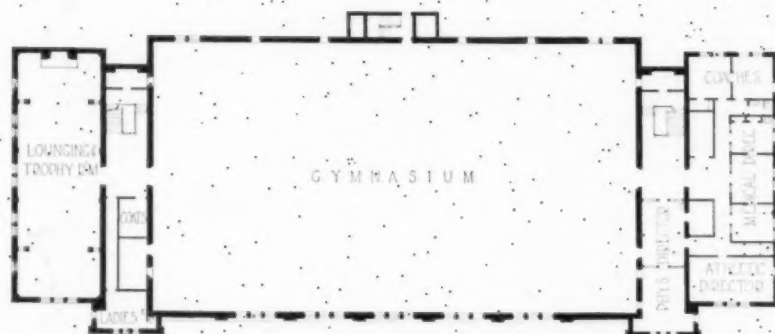
PLANS, GYMNASIUM, NORTH CAROLINA STATE COLLEGE OF AGRICULTURE, RALEIGH, N. C.

HOBART B. UPJOHN, ARCHITECT

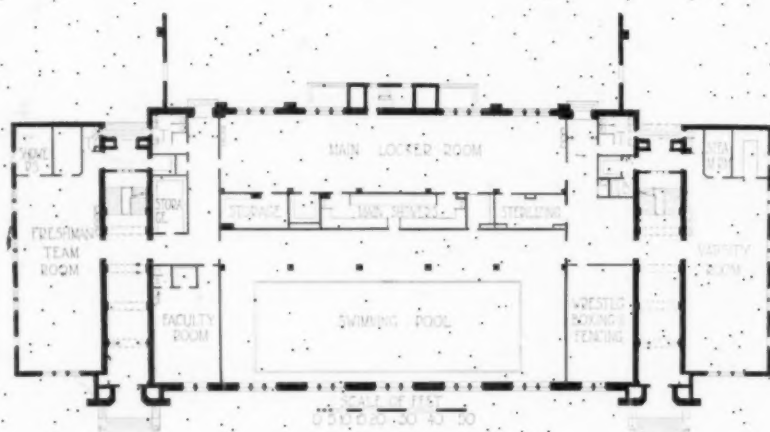


ENTRANCE, GYMNASIUM
UNIVERSITY OF INDIANA, BLOOMINGTON, IND.
R. P. DAGGETT & CO., ARCHITECTS

Plans on Back



SECOND FLOOR



FIRST FLOOR

PLANS, GYMNASIUM, UNIVERSITY OF INDIANA, BLOOMINGTON, IND.

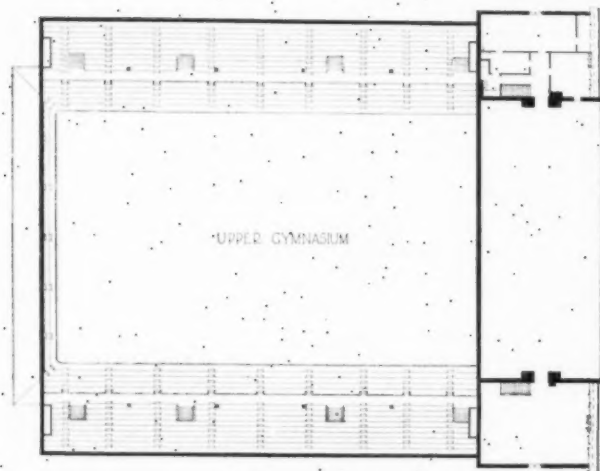
R. P. DAGGETT & CO., ARCHITECTS



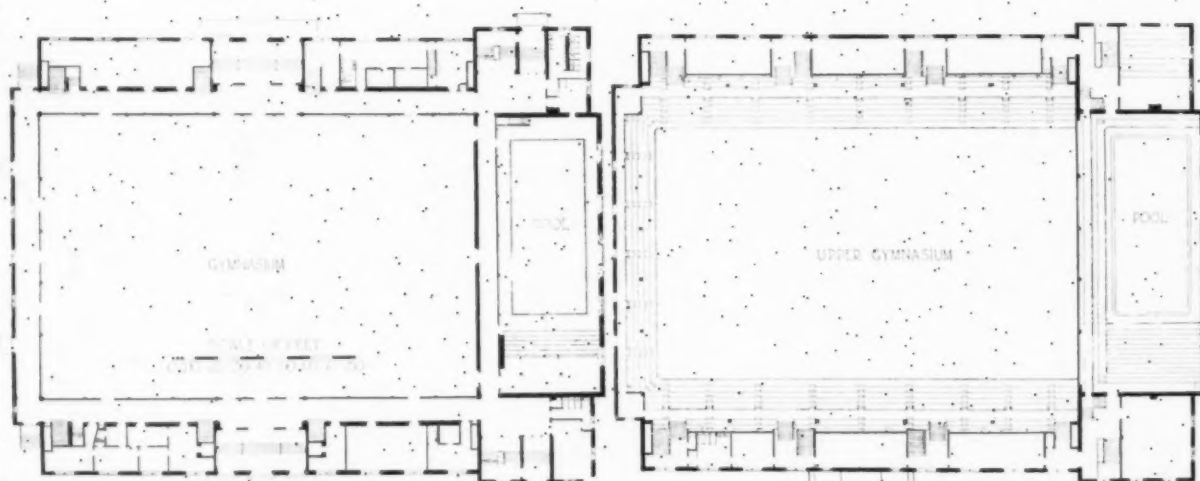
Photo. Tebbs & Knell, Inc.

Plans on Back

EAST ENTRANCE, MEN'S GYMNASIUM
UNIVERSITY OF ILLINOIS, URBANA, ILL.
JAMES M. WHITE AND CHARLES A. PLATT, ASSOCIATED ARCHITECTS



THIRD FLOOR

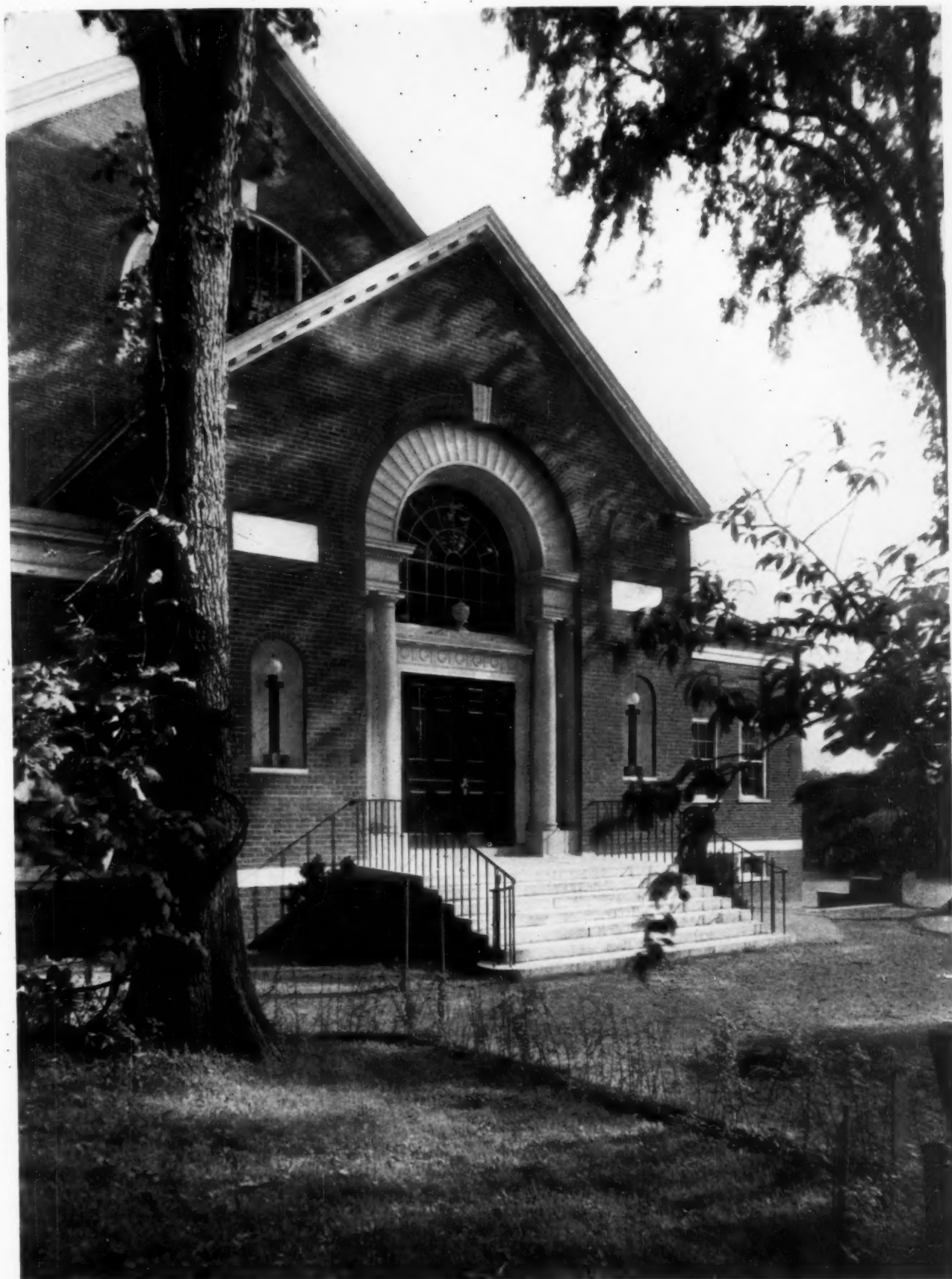


FIRST FLOOR

SECOND FLOOR

PLANS, MEN'S GYMNASIUM, UNIVERSITY OF ILLINOIS, URBANA, ILL.

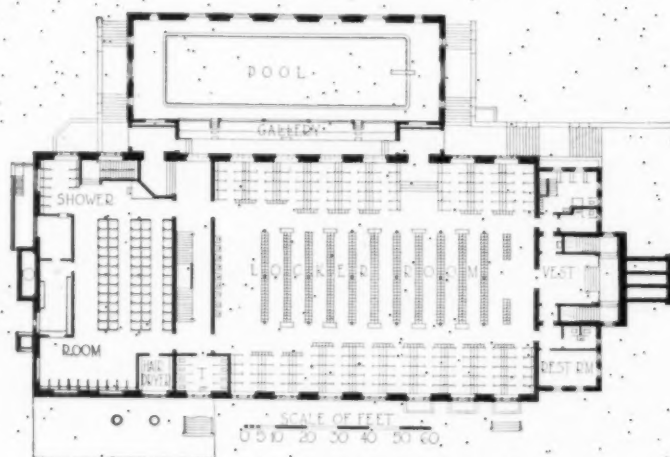
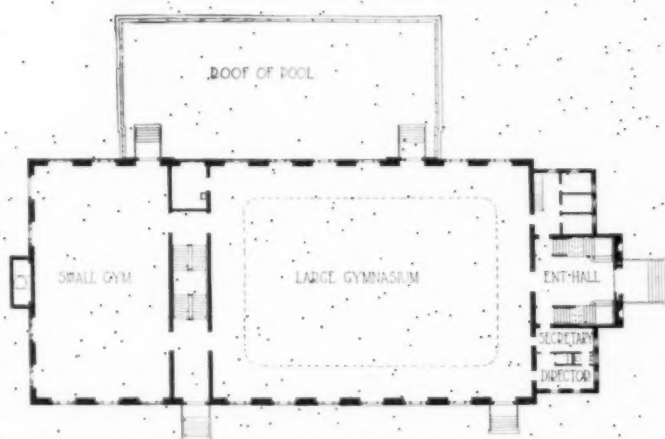
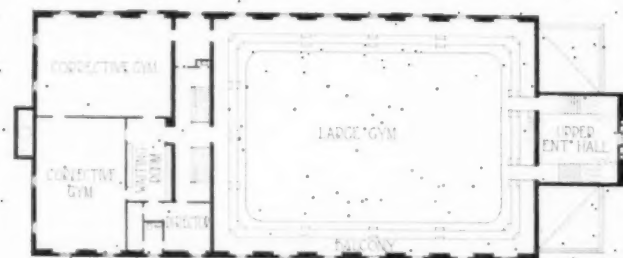
JAMES M. WHITE AND CHARLES A. PLATT, ASSOCIATED ARCHITECTS



Photo, Paul J. Weber

Plans on Back

ENTRANCE, GYMNASIUM
SMITH COLLEGE, NORTHAMPTON, MASS.
J. W. AMES AND E. S. DODGE, ARCHITECTS



PLANS, GYMNASIUM, SMITH COLLEGE, NORTHAMPTON, MASS.

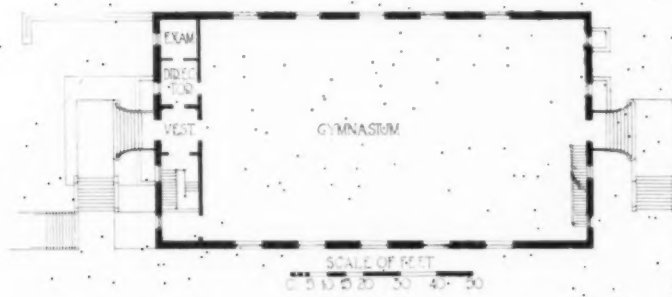
J. W. AMES AND E. S. DODGE, ARCHITECTS



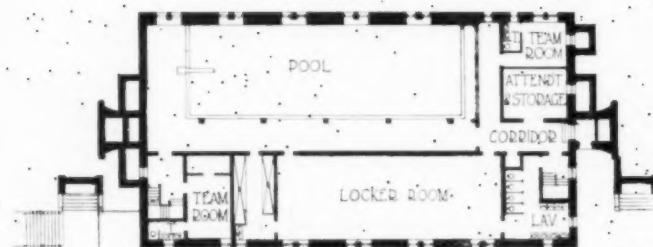
Photo. Dix Duryea

ENTRANCE, GYMNASIUM
MANHATTAN COLLEGE, RIVERDALE-ON-HUDSON, N. Y.
JAMES W. O'CONNOR, ARCHITECT

Plans on Back



FIRST FLOOR



BASEMENT

PLANS, GYMNASIUM, MANHATTAN COLLEGE, RIVERDALE-ON-HUDSON, N. Y.

JAMES W. O'CONNOR, ARCHITECT



Photo, Tebbs & Knell, Inc.

DORMITORY, COLUMBIA THEOLOGICAL SEMINARY, COLUMBIA, S. C.
WILSON, BERRYMAN & KENNEDY, ARCHITECTS

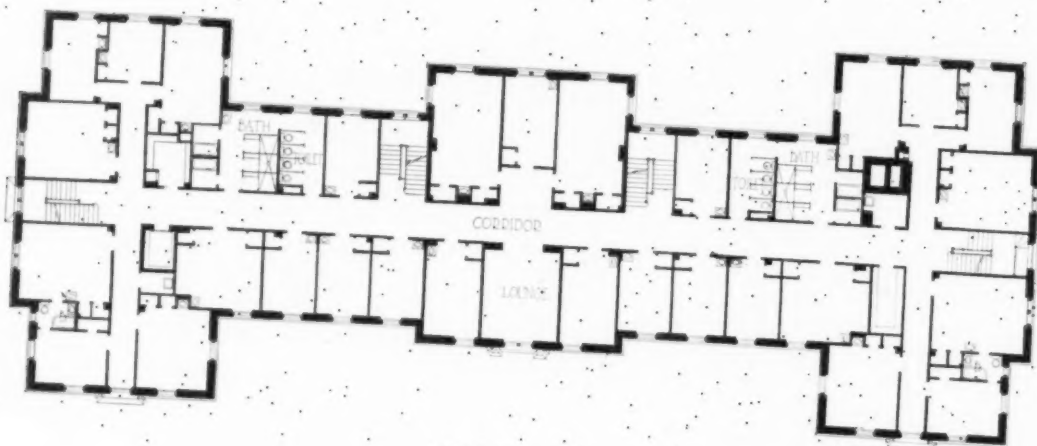
Architectural
Library



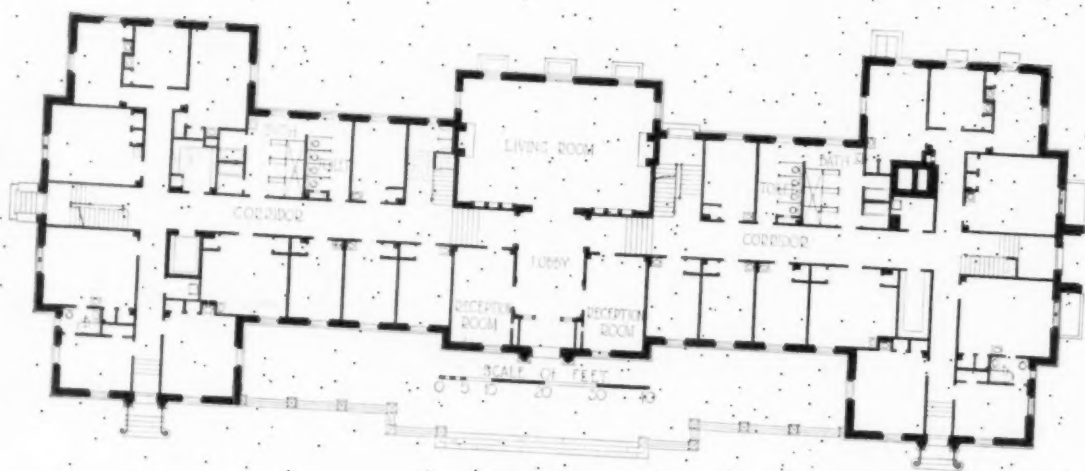
Photo. Tebbis & Knell, Inc.

DORMITORY, THEOLOGICAL COLLEGE FOR LAY WORKERS, RICHMOND, V.A.
BASKERVILLE & LAMBERT, ARCHITECTS

Plans on Back



SECOND FLOOR



FIRST FLOOR

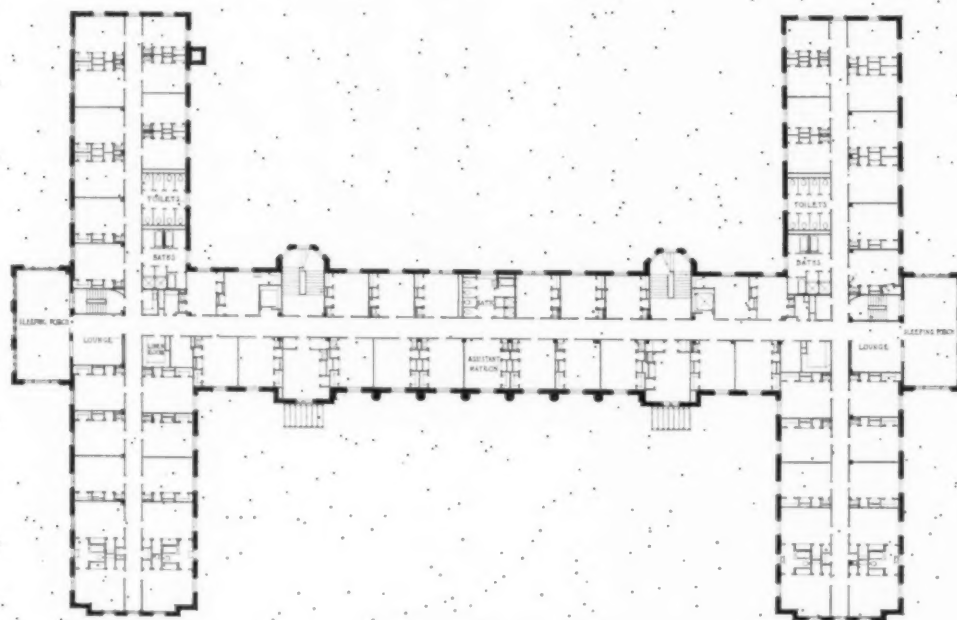
PLANS, DORMITORY, THEOLOGICAL COLLEGE FOR LAY WORKERS, RICHMOND, VA.
BASKERVILLE & LAMBERT, ARCHITECTS.



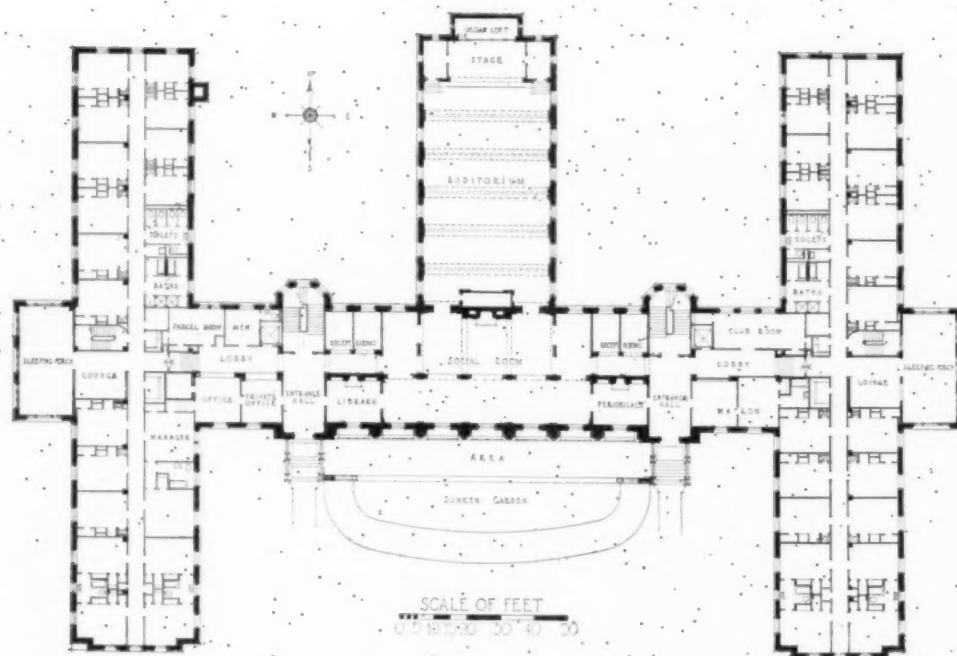
Photo. Jordan Company

SOUTH FRONT, SCOTTISH RITE DORMITORY FOR WOMEN
UNIVERSITY OF TEXAS, AUSTIN, TEX.
HERBERT M. GREENE COMPANY, ARCHITECTS

Plans on Back



SECOND FLOOR



ENTRANCE FLOOR

PLANS, SCOTTISH RITE DORMITORY FOR WOMEN, UNIVERSITY OF TEXAS, AUSTIN, TEX.

HERBERT M. GREENE COMPANY, ARCHITECTS

Common Rooms and Dining Halls

By LEIGH FRENCH, JR.

AN indication of the importance of attractive physical environment, which gives reason for the production of objects of decorative art, may be found in the character which is being given to many of the dining halls and common rooms of great and small educational institutions in America. Here we find given practical exemplification the theory that dignified and beautiful surroundings exert upon those who are associated with them an influence which makes for greater human happiness. It is this consideration which gives a reason for the erection of fine rooms, for the creation of fine furniture and other appointments,—the æsthetic reactions which such things draw from those who are conscious of their qualities, as well as from those who are only subconsciously affected, although influenced, by harmony of color, line, proportion and texture.

There is a far-reaching tradition behind the present treatment of the general rooms given over to students, such as refectories and common rooms. A composite of the great halls of the castles and manor houses of the earliest date and the monastic refectories of the middle ages, the dining halls of English colleges took on a special dignity of their own. From earliest times the ceremony of breaking bread, re-

sponsive to one of the most primitive instincts of mankind, has been surrounded with a certain formality and ceremony wherever civilized peoples have developed an organized social life. In mediæval England, the meals in the great hall typified the feudal spirit of the time, the social distinctions of those at table being emphasized by their seating. On a raised dais at the end of the hall sat the lord of the manor with his family and guests of equal rank. Below them came the upper servants, who were seated in order of their relative importance in the scheme of the household organization. In collegiate dining halls much this same seating scheme was observed. On a raised dais at one end sat the masters or others who represented the authority of the college. Below them, at the long tables, sat the students. This scheme is followed in many dining halls of American universities, more particularly in graduate colleges, where faculty and students mingle more closely than in undergraduate life. In the general run of dining halls for undergraduates, the raised dais is omitted, the whole room being given over to long tables for students. In larger colleges and universities each of the different classes has its own dining hall; in smaller colleges, one large dining

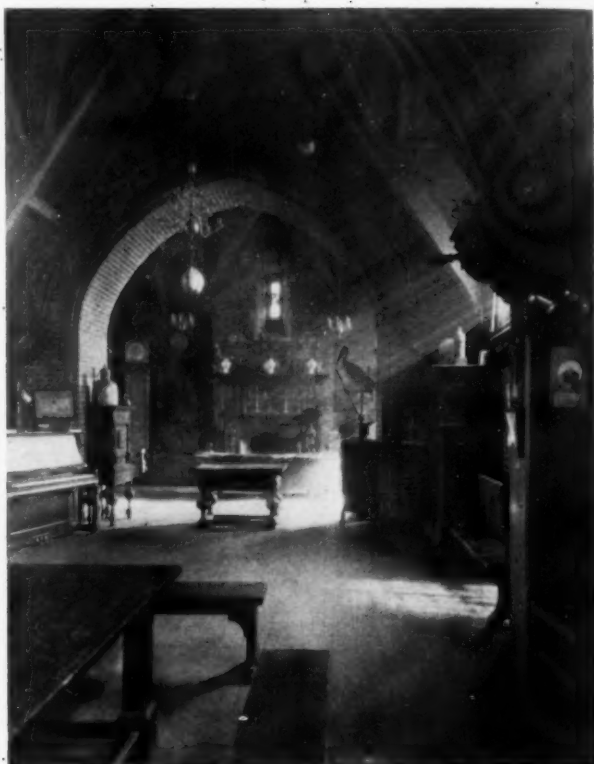


Common Room, Smith Hall, Harvard Freshman Dormitories
Shepley, Rutan & Coolidge, Architects



Dining Hall, Law School, University of Michigan,
Ann Arbor

York & Sawyer, Architects



Meeting Room, Lagoon Building, Harvard University,
Cambridge, Mass.

Edmund W. Wheelwright, Architect

hall serves all those who partake of the college fare.

In architectural style, the schemes and decoration of these rooms follow those of all periods,—medieval, Renaissance, and eighteenth century Georgian. The form of such a room is almost invariably rectangular, of considerably greater length than width. The direct lighting comes chiefly from windows set high in the walls, the artificial lighting being from chandeliers hung from the ceiling. Paneling is frequently, although by no means invariably, used. Handsome fireplaces give the strongest accent to the design, and they should be carefully considered.

Our illustrations show a group of four rooms, the stylistic basis of which is that of the middle ages.

The great Dining Hall of the University of Michigan Law School is of considerable archaeological correctness. It is a room conceived on a grand scale and consistently carried out in excellent and appropriate materials. The wooden roof, perhaps a trifle too fine in scale for its height from the floor, is well designed. The great window at the end is too conventional in form and snacks perhaps rather too much of that in the Great Hall of the Princeton Graduate College. The arrangement of the tables, parallel to the short axis of the room, is somewhat unfortunate. In the Meeting Room of the Harvard Lagoon building, there is sensed a less serious mood of modern medievalism. Here a certain exaggerated pitch to the



Dining Room, Standish Hall, Harvard Freshman Dormitories, Cambridge, Mass.

Shepley, Rutan & Coolidge, Architects





Common Room, Wesley Foundation, University of Illinois, Urbana, Ill.

Holabird & Roche, Architects

room, contrasts with the flat arch underneath, the combination producing the quaintness, just falling short of grotesquerie, which is well adapted to the uses of the building. The Common Room of the Wesley Foundation, Urbana, is more quaint than fine, suggesting rather a cottage prototype than that of a castle. It exhibits simplicity and economy to the minimum. Its effect suffers very much from inadequate furnishing. The room in the Students' Memorial Building at Nashville, is again a much simplified rendering of a much finer original style. In these rooms, as in most "great halls" based on the mediæval, the principal decorative element is the ceiling. Use of the more expensive hammer-beam type is avoided, a



Common Room, Students' Memorial Building Vanderbilt University Nashville, Tenn.

H. C. Hibbs, Architect

simple pitch roof, in some cases elaborated with trusses, being generally employed. It is doubtful whether this mediæval style is susceptible of being given a successful rendering in simplified form. The result is usually coarse and often banal, and carries neither the conviction of an authentic original old nor the spirit of a spontaneous new form.

In the Harvard Freshman Dormitories an appropriate and successful use has been made of precedent of Georgian character. Together with a simple dignity there is preserved a certain atmosphere of home-like comfort. The rooms are all comparatively low and are flooded with light. Decoration is sparingly used, and is placed with care and discretion. There



Dining Room, Gore Hall, Harvard Freshman Dormitories, Cambridge, Mass.

Shepley, Rutan & Coolidge, Architects



Dining Room, Smith Hall, Harvard Freshman
Dormitories
Shepley, Rutan & Coolidge, Architects



Common Room, Smith Hall, Harvard Freshman
Dormitories
Shepley, Rutan & Coolidge, Architects

is variety in the use both of naturally finished wood trim and of painted woodwork, and paneling. The fireplaces, as is proper, form the center of the decorative scheme. These lounge rooms, libraries and refectories in the Freshman Dormitories acquire a certain veracity of effect through the consistency between the exteriors of the buildings and the interiors.

The Social Room of the Scottish Rite Dormitory for Women at the University of Texas possesses little more than the correctness of hotel architecture. It recognizes no original prototype; and yet fails to create any real form of its own. The architectural

treatment, however, forms a harmless background for the furnishing, which in itself is very inadequate.

There would seem to be one general tendency in designing such interiors as these which we are considering,—this is to refer or relate the design to some earlier prototype, but, whether because of shortness of funds or lack of appreciation of the finer and essential points of the design, to stop short of a completely studied and really satisfactory result. This is unfortunate, since such great rooms as are required in collegiate or university buildings present an opportunity for achieving a distinguished effect.



Common Room, Standish Hall, Harvard Freshman Dormitories, Cambridge, Mass.
Shepley, Rutan & Coolidge, Architects

College Y. M. C. A. and Religious Buildings

By REXFORD NEWCOMB

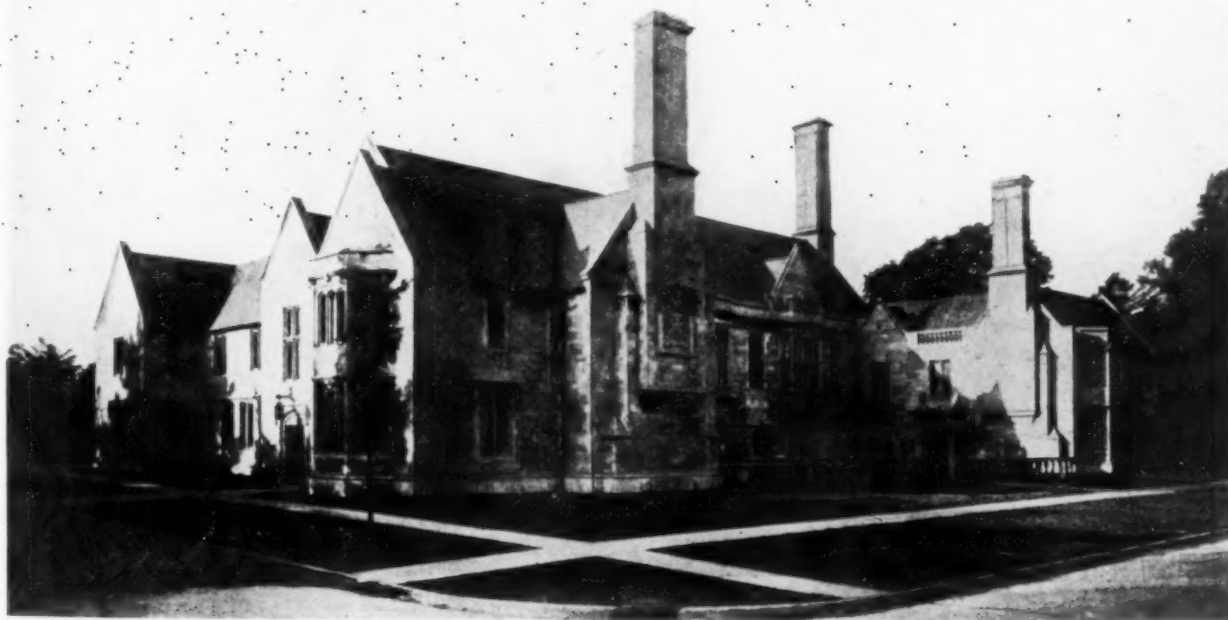
THE relationship between religion and education in the United States has been long and far-reaching. At one time in our history, educational institutions owed their origin and support almost entirely to the great religious bodies of our land, and our lads went to Presbyterian, Methodist, Congregational, Baptist or Catholic colleges, their choices depending pretty largely upon the faith of their parents. All of our older institutions of learning, with very few exceptions, grew out of educational movements in the Church, and indeed the guardianship of the Church over the College is still one of the salient factors in American education at large, just as, in fact, it always has been.

But with the growth of our commonwealths and the development of the public school system, the State as an educating agency came forward. In the beginning many of these state-supported institutions, as well as the church-owned schools, offered religious instruction under various guises and names, such as Mental and Moral Philosophy, but as time has gone on the general tendency has been to eliminate all religious teaching, and in some of our larger institutions to completely ignore giving such teaching as a university function. This was doubtless due, in part at any rate, to the same popular demand that ruled the reading of the Bible out of the public schools, on the ground that it was often read with sectarian bias and intent. Moreover, the institutions of this period were largely concerned with the development of professional instruction, especially in the sciences, engi-

neering and agriculture, and with these material occupations it was considered, strange to say, that religion had little to do. During this period there was a tendency to prescribe the *curricula*, leaving little in the way of elective subjects, with the result that the student mind became accustomed to having courses chosen for it, and since religious instruction was omitted, it made little attempt to demand such courses, or to obtain their equivalent in other ways.

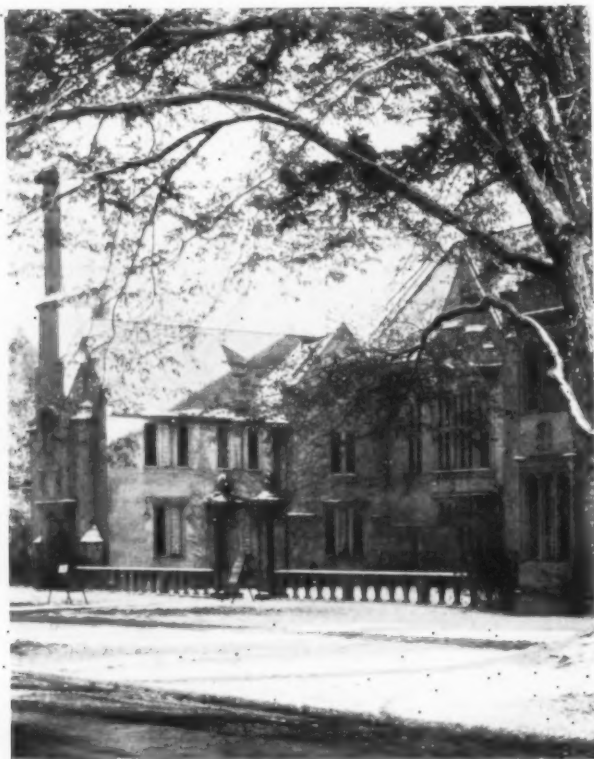
The great religious agencies in the state-owned institutions of the latter half of the nineteenth century were the Young Men's and the Young Women's Christian Associations. That these were all-inclusive or as far-reaching in their influence as they should have been, no one would attempt to prove; yet they ministered to the moral and religious aspects of life in our educational institutions at a time when the public press was claiming that our colleges and universities were becoming "godless," and that higher education in our land was a failure. The Y. M. C. A. building of this period was an ample and often costly club house, containing large dormitory and study accommodations, committee rooms, lounging rooms, baths, billiard rooms, bowling alleys, and other amusement rooms, dining halls, etc. Many of these institutions maintained the appearance of great campus club houses up until the time of the World War.

When the war came, the Y. M. C. A. secretaries went in, and in common with other agencies operated both at home and abroad those serviceable little "hospices," popularly known as the "Y huts." The



Social Center, Wesley Foundation, University of Illinois, Urbana, Ill.

Holabird & Roche, Architects

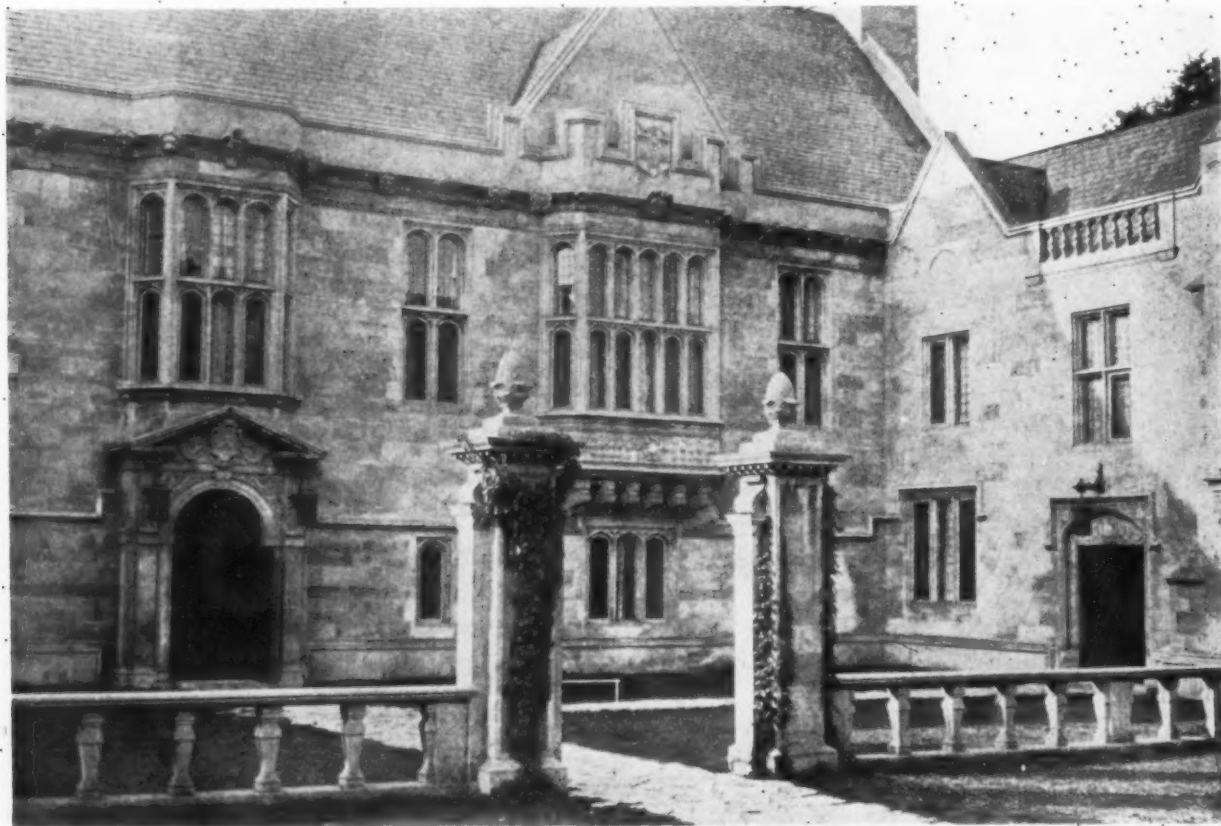


Entrance Court, Social Center, Wesley Foundation,
University of Illinois, Urbana, Ill.
Holabird & Roche, Architects

experience of the directors and secretaries of the Association during this period of changing values convinced the alert that the college Y. M. C. A., club-hotel of the pre-war period, was no longer an efficient or a desirable type of institution. Thus, the "hut-idea" came to the front to dominate Y. M. C. A. architecture. While many of the older local Associations still find themselves in possession of the old type of structures, the tendency among the college Y. M. C. A.'s is to dispose of the old properties and to erect buildings of the newer type. As compared with that of the older structures, the program for the newer is very much simplified and makes only these comparatively few and broad requirements:

- (1) A social hall for general mixing and intercourse of students, who "drop in" for a few moments between classes or at other times.
- (2) A great hall for large general social functions. This room serves much as a living room in the residence.
- (3) A group of offices for the general secretary and his assistant secretaries.
- (4) Several committee rooms, which are used for Association functions or loaned to other college agencies.
- (5) The necessary toilets, washrooms and similar utilities.

This simple program has found a very happy expression in the Young Men's Christian Association Building at the University of Minnesota, which was designed by Prof. Frederick M. Mann. This structure, in the estimation of the writer, represents the most satisfactory exemplification of this type thus



Entrance Court, Social Center, Wesley Foundation, University of Illinois, Urbana, Ill.
Holabird & Roche, Architects

far erected upon any American university campus.

The place formerly taken by the Y. M. C. A. has, upon many a college campus, been given over to what is generally termed the "Student Union," which is really a great democratic campus club. It offers many of the services formerly supplied by the Association, a type of service, be it said, which should be delegated to the general student body rather than to a special agency such as is the Y. M. C. A. At many of our colleges large social clubs or "Union buildings" have already made their appearance, that at the University of Michigan, of which Pond & Pond are the architects, being perhaps the most elaborate thus far erected. Thus it would seem that the Y. M. C. A. is specializing its functions, and giving over such general activities as those named here to this new agency in campus life, as seems to be proper.

Another religious influence has, in recent years made itself felt in the state-owned institutions. Originating first in a desire upon the part of the religious denominations to have chapels for the use of their adherents resident at the state universities, the movement has grown, with the result that in most of our state institutions there are now churches for the use of such students. Within rather recent years these churches have taken on added duties, attempting not only to supply religious influence in the life of the student but also to occupy a large place in the social life of the student body. Added to this there has



Detail, North Entrance, Social Center, Wesley Foundation, University of Illinois, Urbana, Ill.

Holabird & Roche, Architects



Garden Front, Wesley Foundation, University of Illinois, Urbana, Ill.

Holabird & Roche, Architects



Photos. Tebbs & Knell, Inc.

DETAIL, WESLEY FOUNDATION, UNIVERSITY OF ILLINOIS, URBANA, ILL.
HOLABIRD & ROCHE, ARCHITECTS



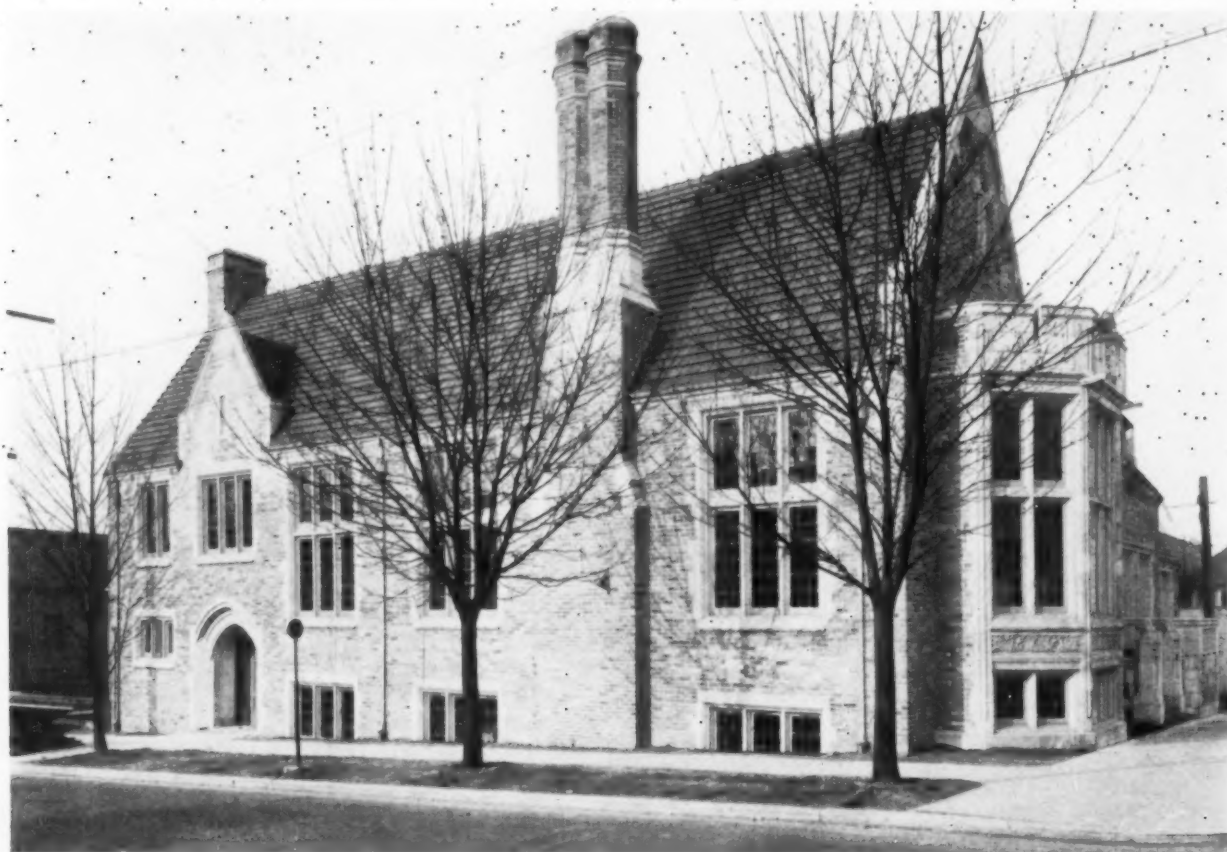
Photos. Tebbs & Knell, Inc.

NORTH ENTRANCE, SOCIAL CENTER, WESLEY FOUNDATION, UNIVERSITY OF ILLINOIS, URBANA, ILL.
HOLABIRD & ROCHE, ARCHITECTS

been a demand on the part of many for something in the way of religious instruction other than that afforded by the Sunday Schools conducted by college churches. This movement for some years found expression in the little study groups conducted in various churches by the college pastors or by interested professors. The facilities for carrying on such functions, especially in the larger institutions, were meager in relation to the work at hand, and so taxed the local college churches that recently a movement was instituted to enlist the attention of the general church bodies in this work. This movement in the Methodist Church resulted in the establishment of what are known as the "Wesley Foundations," and organizations bearing this name have been incorporated in several states and have established instruction-giving institutions at several state universities. The work is supported by the church at large and by the state church organizations, the division of labor and support being by states. This development on the part of the Methodist body has been paralleled by that of other denominations, with the result that such an institution as the University of Illinois finds clustered about its campus these religious organizations: "Wesley Foundation" (Methodist); "Illinois Disciples Foundation" (Church of Christ, Disciple); "Pilgrim Foundation" (Congregational); "Hillel Foundation" (Hebrew); "McKinley Memorial Foundation" (Presbyterian); "Columbus Foundation" (Catholic);

"Most of these institutions are still seeking their architectural expression, and as yet one only, the "Wesley Foundation," has begun the group of buildings that it proposes eventually to erect at the University. Having secured, adjacent to the campus in Urbana, a city square, the Foundation began its architectural realization by the erection of the "Social Centre Building." This structure, designed by Holabird & Roche, will doubtless wield a large influence.

At other mid-western colleges plans are going forward for the erection of similar "Wesley" groups, and in many of our states endowments and building funds are now being raised to finance the erection and support of similar institutions by other churches. To the architectural profession the development of the expression of this new type of structure, with its interesting symbolism and practical demands, will be most interesting. These "institutional plants" will constitute the collegiate churches or chapels of the future. As will be readily seen, buildings of this type make special demands, since a structure such as has been built by the Wesley Foundation at Urbana fulfills many of the functions of a fraternity house, some functions which one thinks of as belonging to the Y. M. C. A., and other functions which are peculiarly its own. A building of this character is of course likely to be placed in an important location in a college or university town, and it is almost certain to be designed upon a scale which renders it impressive.

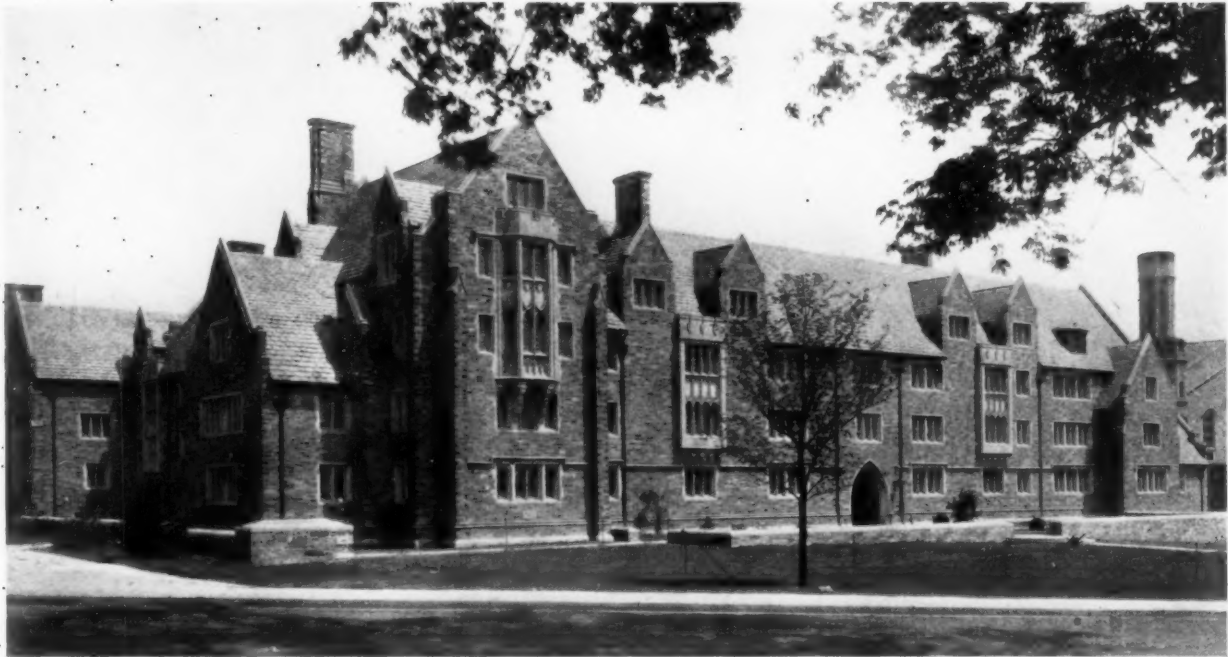


Y. M. C. A., University of Washington, Seattle, Wash.

Bebb & Gould, Architects

Dormitory Designs by Day & Klauder

By MATLACK PRICE



Pyne Hall, Princeton University.

THE problem here, as in all modern architectural practice, is highly specialized, involving far more than meets the eye. The visitor at our universities and colleges quite naturally sees the buildings in terms of picturesque suggestion. Their measure is the degree to which they create illusions of the charm and historic association of; for instance, the old buildings of Oxford and Cambridge in England. There are traditions in scholastic architecture, and though these are essential and often exacting, their maintenance is the least difficult part of the architect's task, as certainly it is the most pleasant. To build towers and broad Gothic portals, to diversify facades with mullioned oriel windows and leaded casements, is to design with some of the most picturesque elements that characterize any style of architecture.

In saying that this is the least difficult part of the designing of college dormitories I do not mean that it is easy, or that it

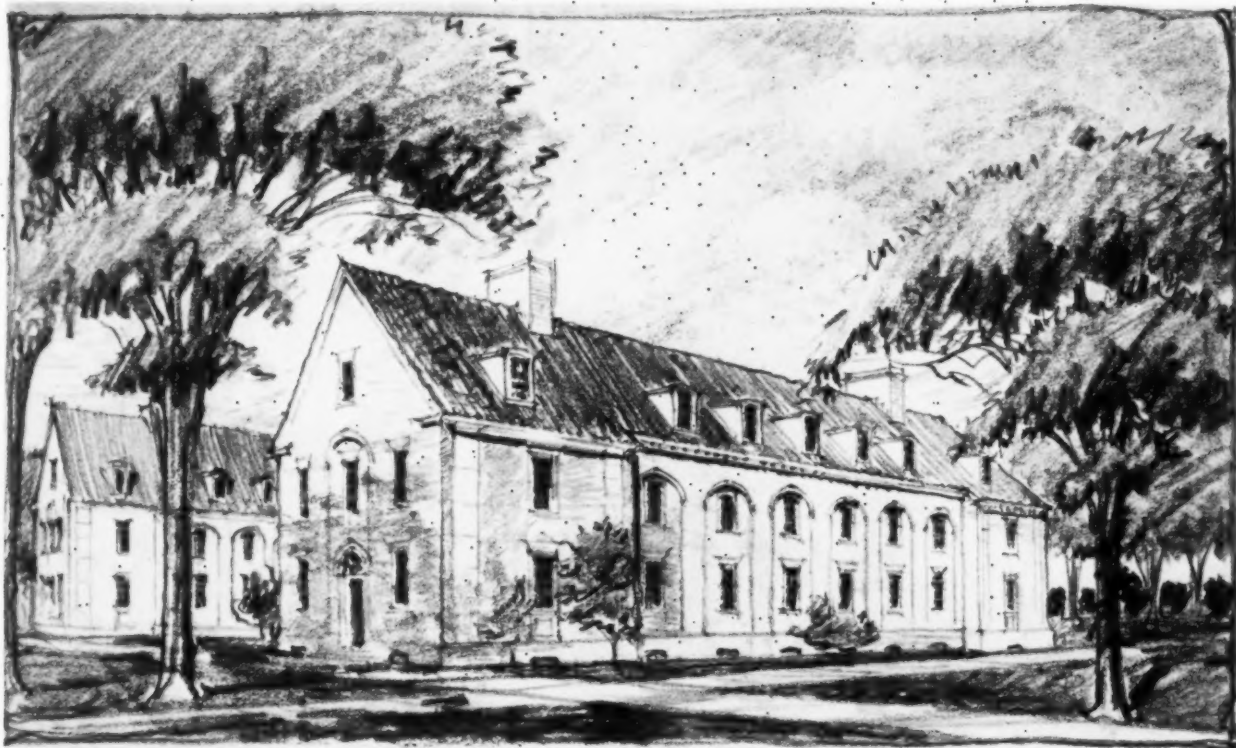
does not call for a great deal of sympathy and a thoroughly assimilated knowledge of precedents, as well as for the highest order of architectural technique in execution. In the best renderings of the scholastic type of Gothic architecture there are the qualities that James Gamble Rogers achieved in

the Harkness Memorial Quadrangle at Yale, the spirit of Goodhue's Gothic, the erudition of Cram's, and the consistently fine work of the office of Day & Klauder.

It is perfectly understandable that a college, when confronted with the question of choosing a style, leans toward use of the old scholastic Gothic of Oxford and Cambridge, and seeks, as at Princeton, to build preponderantly in that style. Many of our universities and colleges, notably Yale and Harvard, have been unfortunate in securing the architectural miscellany that results from putting up buildings at different times, in the mode of the moment, especially when this prac-



Entrance Detail, Sussex Hall (Women's Dormitory) University of Delaware



Franklin and Marshall College Dormitories
Day & Klauder, Architects

tice saddled them with the architecturally atrocious buildings of the 'eighties. For we could have had consistently designed and beautifully designed college groups even if Oxford and Cambridge had not been in the picture at all; we could have followed as models the first old brick buildings of Harvard or, for more southern localities, the somewhat later classicism of Jefferson's University of Virginia. This is precisely what Day & Klauder have done in several instances. Their Littlefield Dormitory at Brown, in Providence, might have been taken from

an old print; it has an absolutely authentic flavor of antiquity, and it is "New England" to the core. And the same is true of the John Rogers Hegeman dormitory group at Brown. There is more than mere architectural design in these buildings; there is an authentic quality, a sense of the spirit of the founders of the University which is unusually successful.

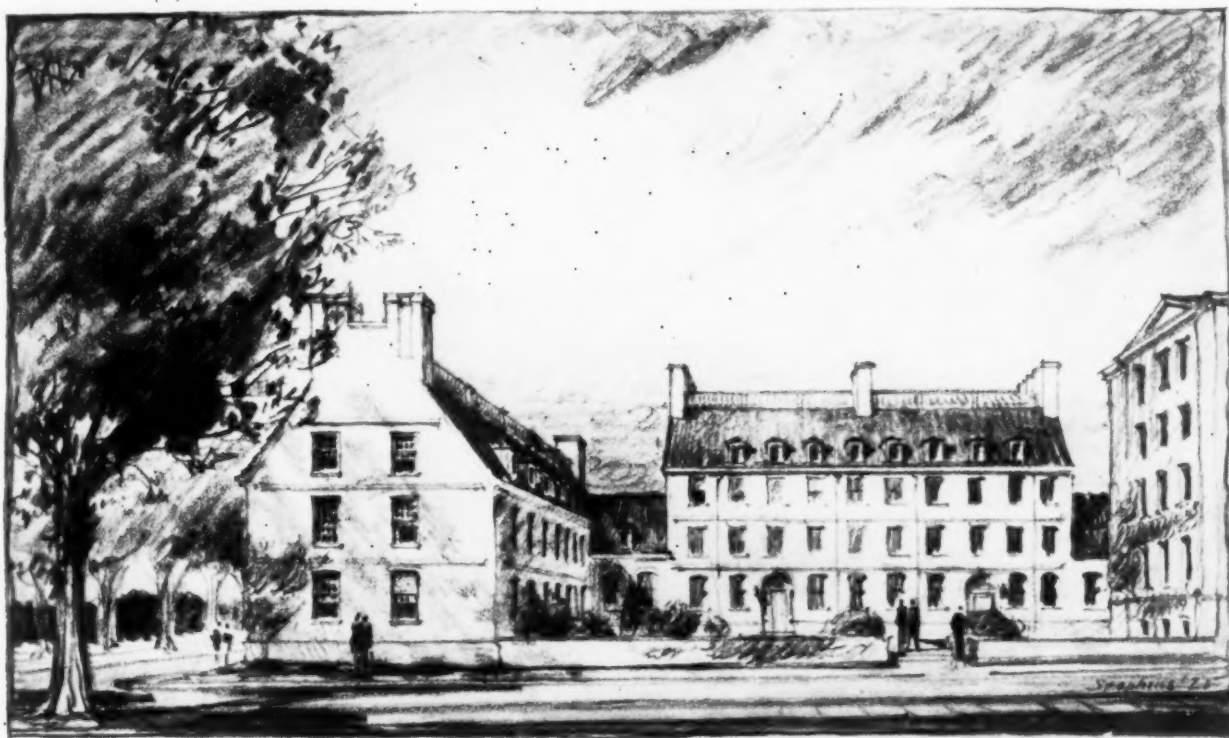
Going farther south for the Georgian type, it has been revived in Dietz Hall and Santee Hall at Franklin and Marshall College (Lancaster, Pa.), in Sussex Hall, at the University of Delaware, and, in

Frederick Watts Hall at the Pennsylvania State College. Day & Klauder have made admirable use of the Delaware and Maryland type of brick architecture. It is a style that lends itself admirably to the design of college buildings, whether single or in groups, and its inherent quality of domesticity makes it particularly an excellent style for dormitories or residence buildings. Its use is almost always successful.

There are not a few critics who argue, from really unsatisfactory premises, that these Georgian Colonial types are more to be desired than adaptations of the English scholastic Gothic type, on the ground that they represent a native



Sussex Hall (Women's Dormitory), University of Delaware
Day & Klauder, Architects

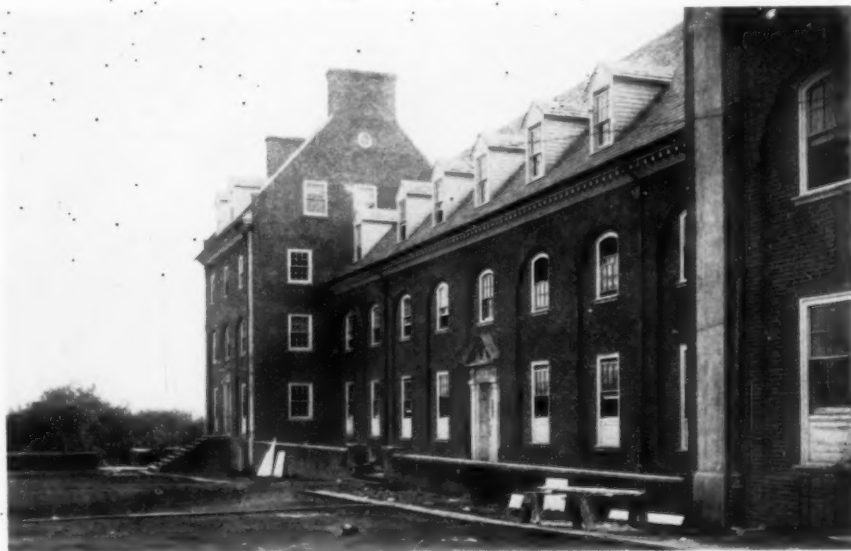


John Rogers Hegeman Dormitory, Brown University, Providence
Day & Klauder, Architects

style. Personally, I can think of no refutation of this that would not degenerate into a highly specious argument; and yet, at the same time, I should be very sorry to think that there were no place in this country for the scholastic Gothic. It is as admissible, certainly, through historic association, as the use of Gothic for the design of churches in this country; and if its qualities of old, quiet charm can give to our students any of the cloistered spirit of old-world scholarliness, or store up in their memories any impressions of their college days comparable with the memories that Englishmen have of Oxford and of Cambridge, all empirical arguments against them may well be dismissed at once.

In the scholastic Gothic manner of England, which was really a Tudor Gothic manner, transitional to the Renaissance, Day & Klauder have done exceedingly well. In Pyne Hall at Princeton there is pleasant diversity in a facade which is essentially simple. The gables have been managed with fine effectiveness, the stone masonry is of the best, and mullioned windows create the essential picturesque interest. Buildings of this kind are at their best

in group design, preferably about a quadrangle, or flanking two sides of a quadrangle. The long plan is always adaptable, and the more there is achieved, an effect of random, rambling informality the more in character the structures are with the buildings that are their prototypes. The plan of the 1901 Hall at Princeton (p. 327) is ideal in this respect, for it has not only two cross-wings at right angles with the main building but a long splayed wing running off from one end. The architects expressed a fine quality of vigor in the Baker Tower at Cornell,—a great



Frederick Watts Hall, Pennsylvania State College
Day & Klauder, Architects

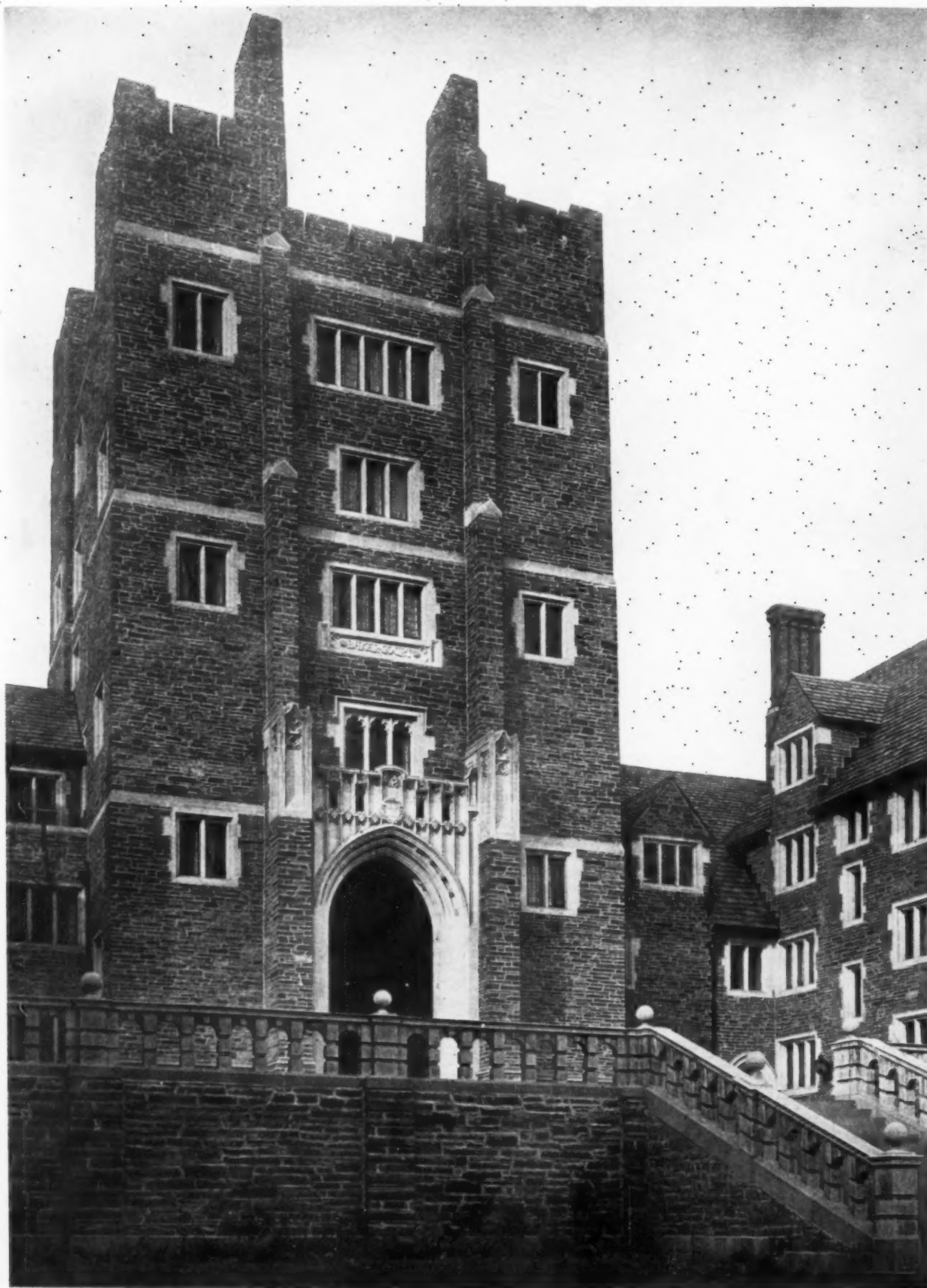


Photo. Roger B. Whitman

DETAIL, BAKER TOWER
CORNELL UNIVERSITY, ITHACA
DAY & KLAUDER, ARCHITECTS

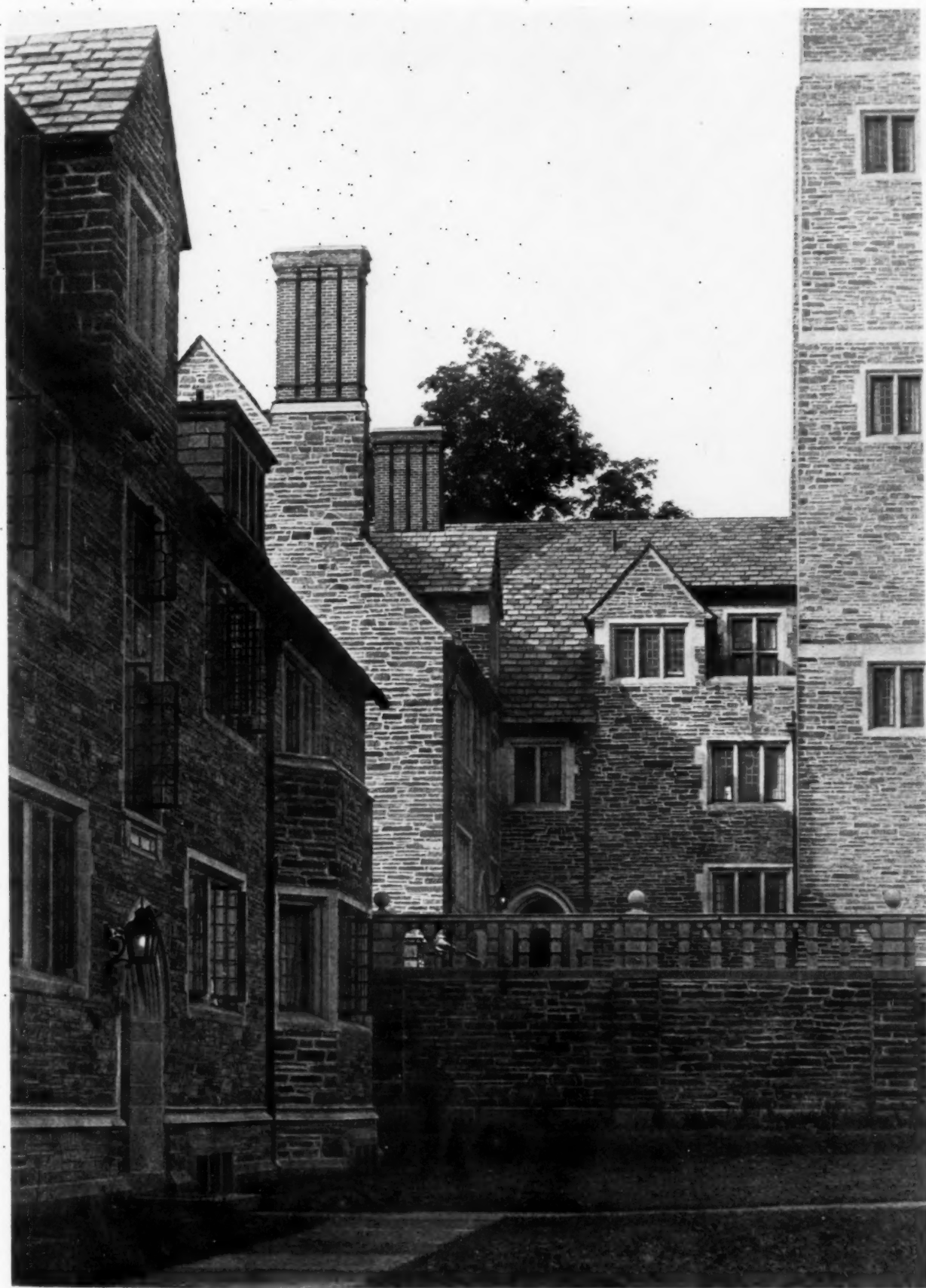


Photo. Roger B. Whitman

COURT WITH BAKER TOWER AT RIGHT; NORTH BAKER DORMITORY AT LEFT
CORNELL UNIVERSITY, ITHACA
DAY & KLAUDER, ARCHITECTS

square mass with buttresses mounting its full height. The scale and character of the stone masonry can stand as exemplifying the technique that should be used with this style; it could not be better done. In conjunction with the Baker group, the Renaissance railing on the terrace, so definitely remindful of Haddon Hall, is an interesting bit of design, and not unlike, somehow, the handiwork of Lutyens, of strong, vigorous character.

The element of specialization in the design of college dormitories lies in the plan, which calls for a full measure of study and ingenuity to provide for a maximum number of students, comfortably quartered, at a reasonable cost per student. The "cost per student" basis is customary in estimating the cost of college dormitory buildings, and it will be seen at once that in any given building the cost per student will depend upon whether a dormitory is made up wholly of bedrooms, or whether a certain proportion of the rooms are in suites for two students with a study, or for one student with a study. Space occupied by large hallways, "commons" or committee rooms naturally tends to increase the cost per student, and in comparing figures on some of the dormitories illustrated here it seems that approximately

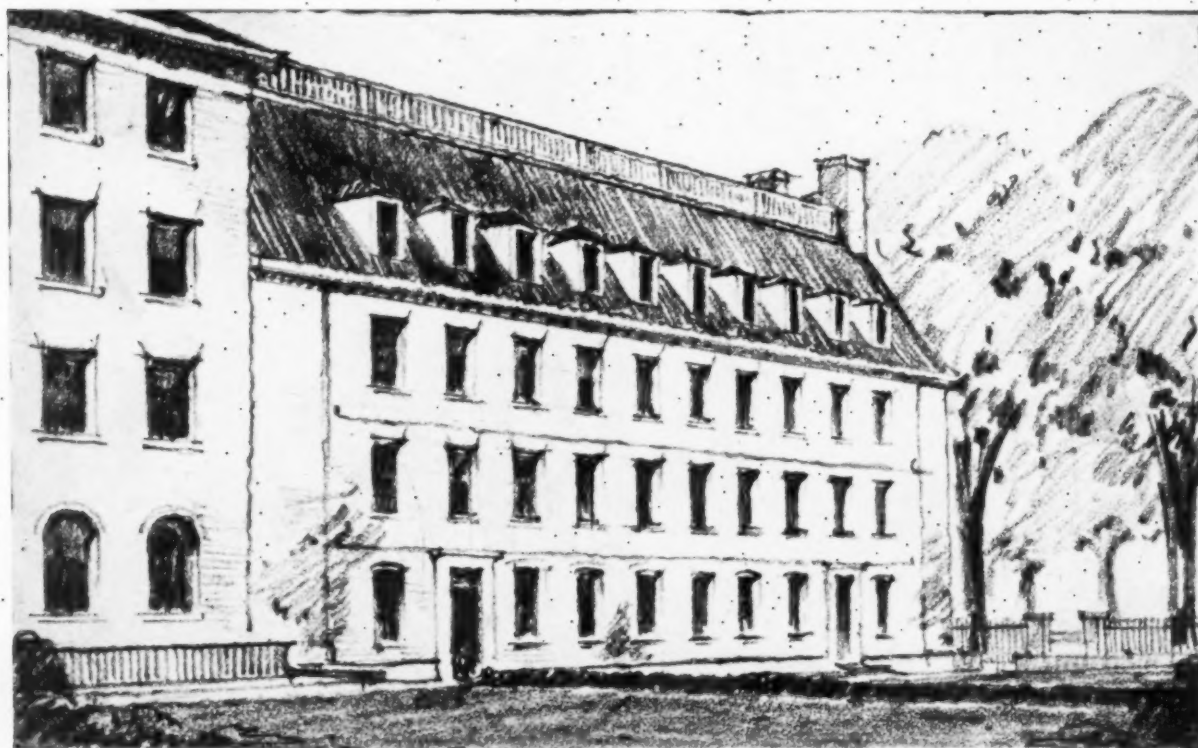


Harter Hall, University of Delaware
Day & Klauder, Architects

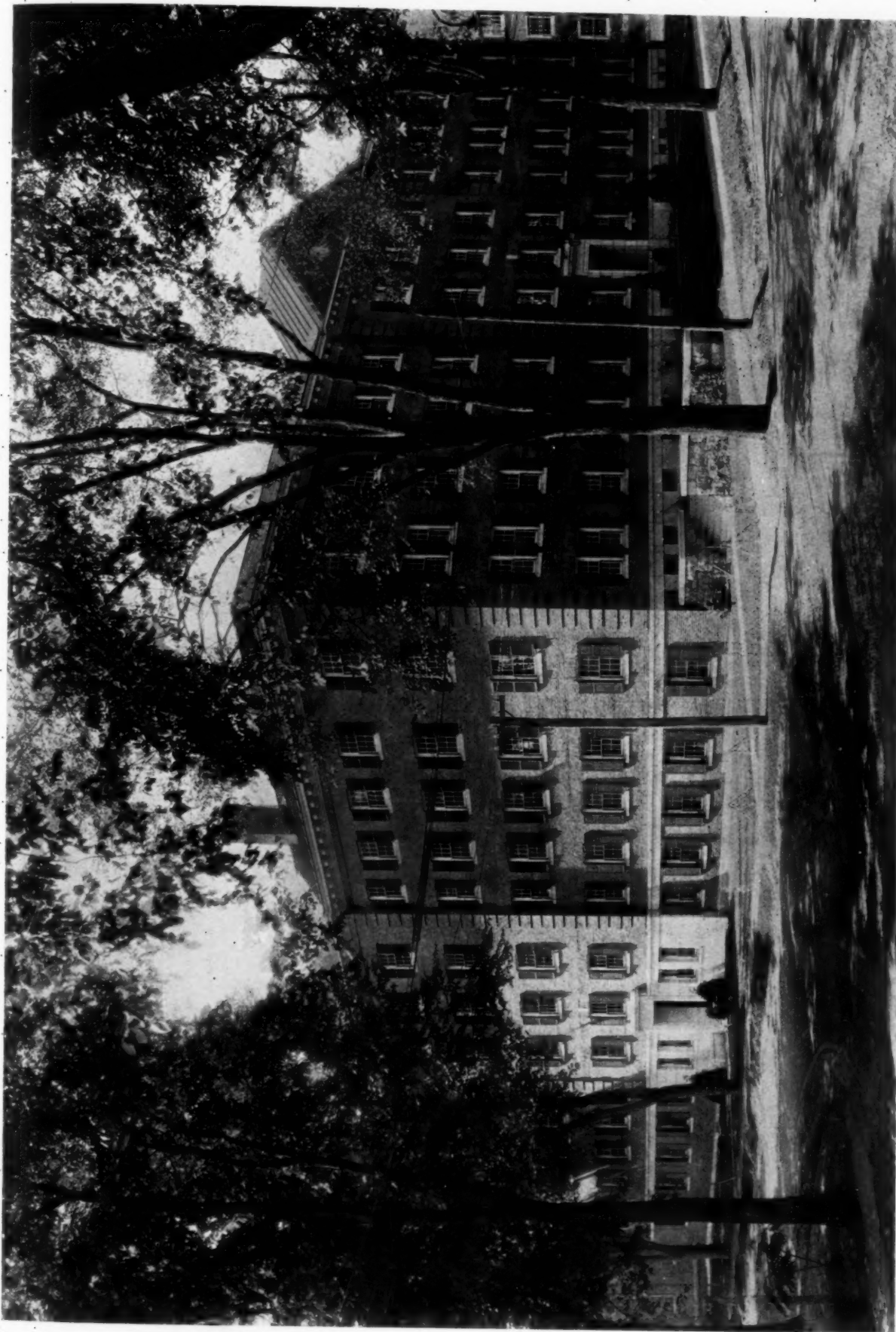
\$1,500 per student is the lowest, approximately \$3,500 is the highest, and that figures between \$2,000 and \$2,500 are the average allowance. This "cost per student" is figured on a basis of the total cost of the building, and should prove a valuable check figure for all architects who are planning college or university dormitories.

There is no standardization in the proportion of single rooms to rooms with studies, as this varies with the requirements of each case. Other variables make it still more difficult to develop anything like a formula. But Day & Klauder have developed something far better than a formula; they have developed a variety of eminently fine college buildings for America, and have proved that the stylistically suitable college dormitory is as thoroughly suited to its location as its planning and equipment are practical.

For buildings of the college dormitory type there are not infrequently fixed cost limitations within which the architect must work, and certain factors, obviously, will reduce the cost per student,—factors of material and type of construction and factors of plan. Generally speaking, the solution is best found in the plan of maximum economy in which a greater number of students provided for will reduce the cost.

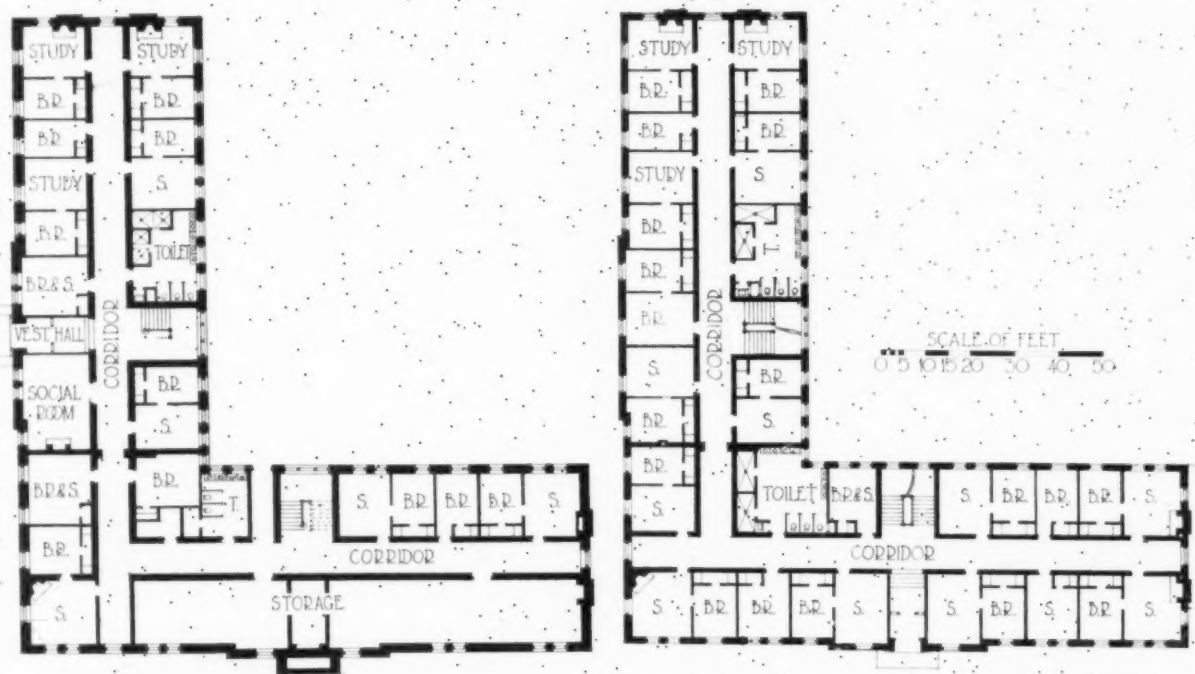


From a Pencil Rendering of Littlefield Dormitory, Brown University, Providence
Day & Klauder, Architects



Plans on Back

TOPLIFF HALL
DARTMOUTH COLLEGE, HANOVER, N. H.
LARSON & WELLS, ARCHITECTS



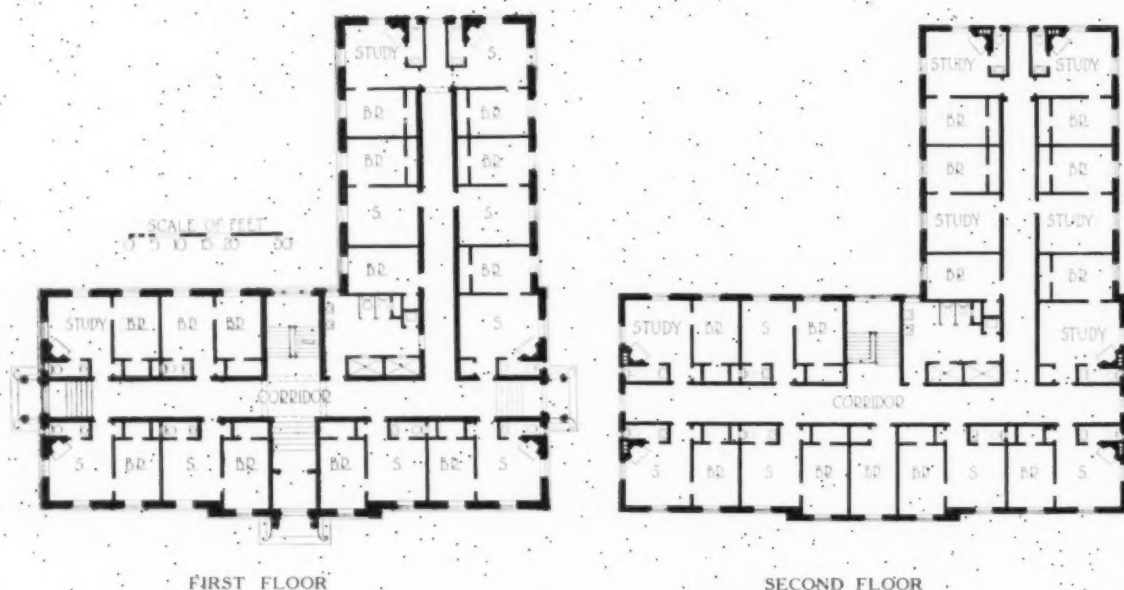
PLANS, TOPLIFF HALL, DARTMOUTH COLLEGE, HANOVER, N. H.

LARSON & WELLS, ARCHITECTS

Plans on Back

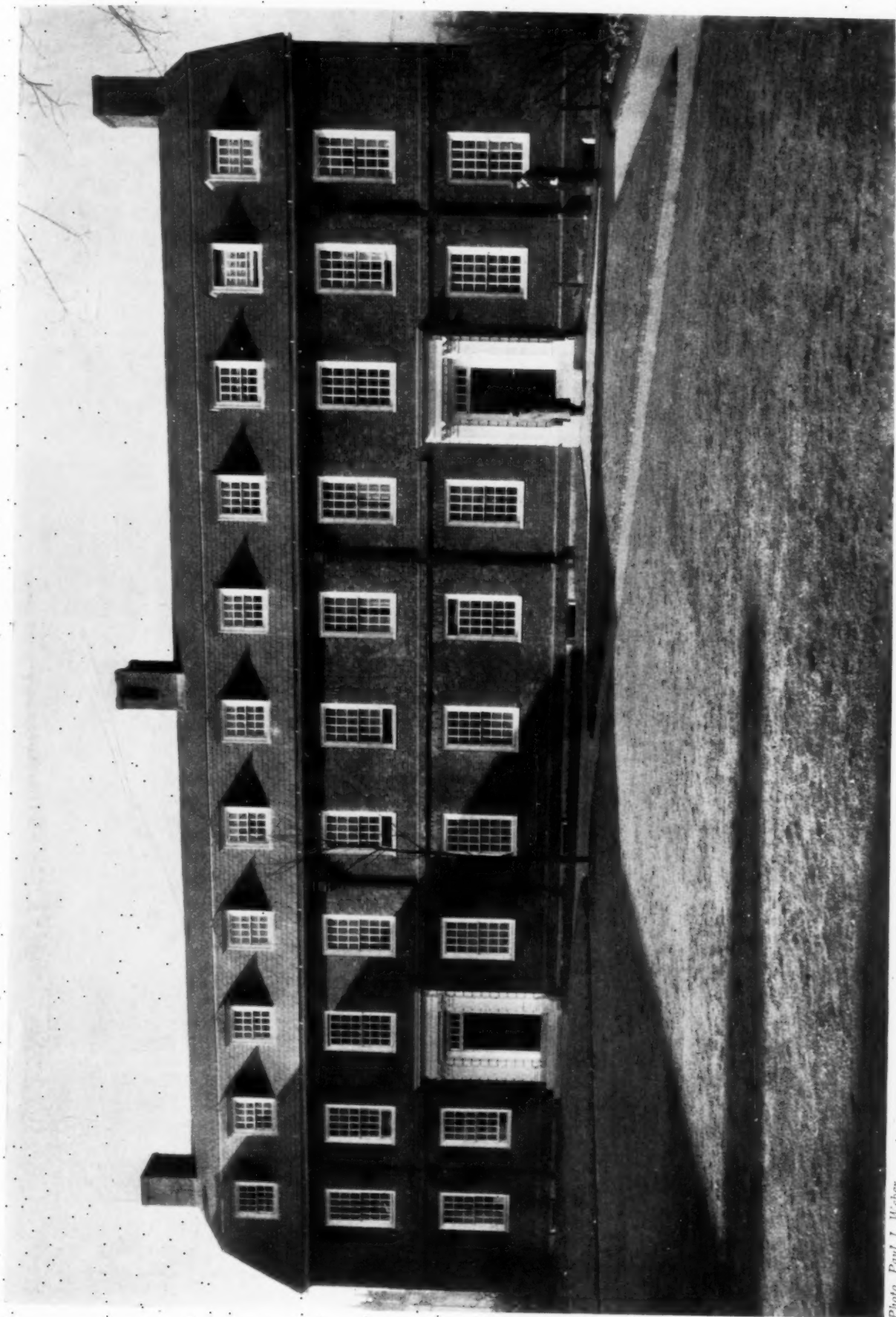


RUSSELL SAGE HALL
DARTMOUTH COLLEGE, HANOVER, N. H.
LARSON & WELLS, AND OFFICE OF JOHN RUSSELL POPE, ARCHITECTS



PLANS, RUSSELL SAGE HALL, DARTMOUTH COLLEGE, HANOVER, N. H.

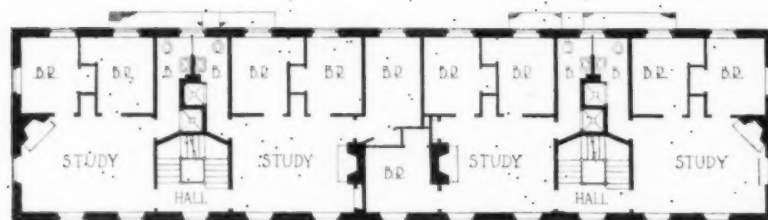
LARSON & WELLS AND OFFICE OF JOHN RUSSELL POPE, ARCHITECTS



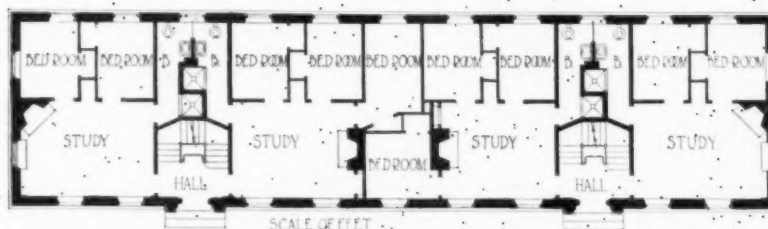
Plans on Back

LIONEL HALL
HARVARD UNIVERSITY, CAMBRIDGE, MASS.
COOLIDGE, SHEPLEY, BULFINCH & ABBOTT, ARCHITECTS

Photo, Paul J. Weber



SECOND FLOOR



SCALE OF FEET
0 5 10 15 20

FIRST FLOOR

PLANS, LIONEL HALL, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

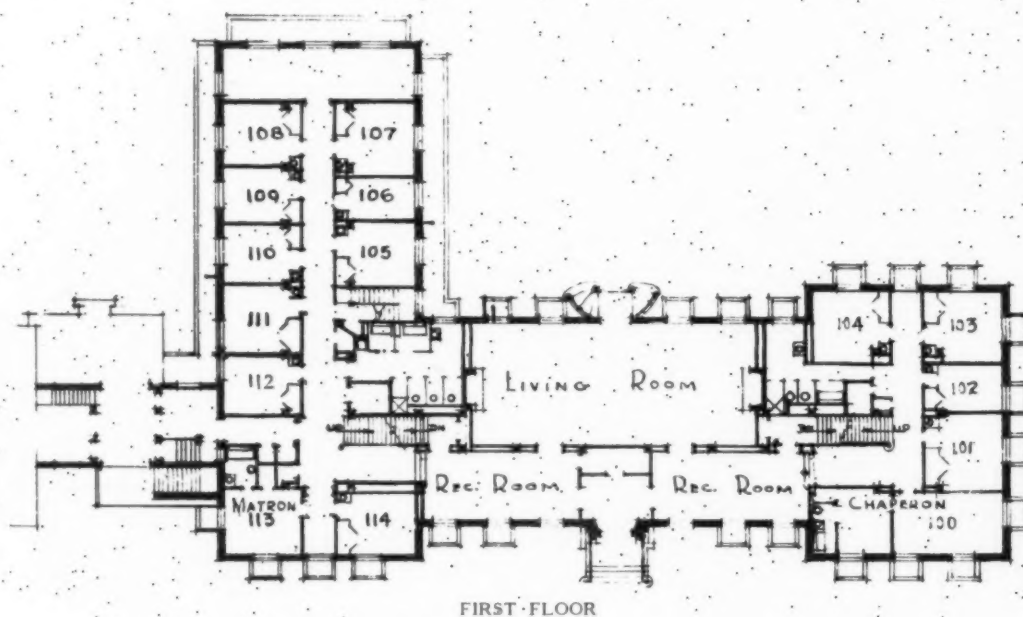
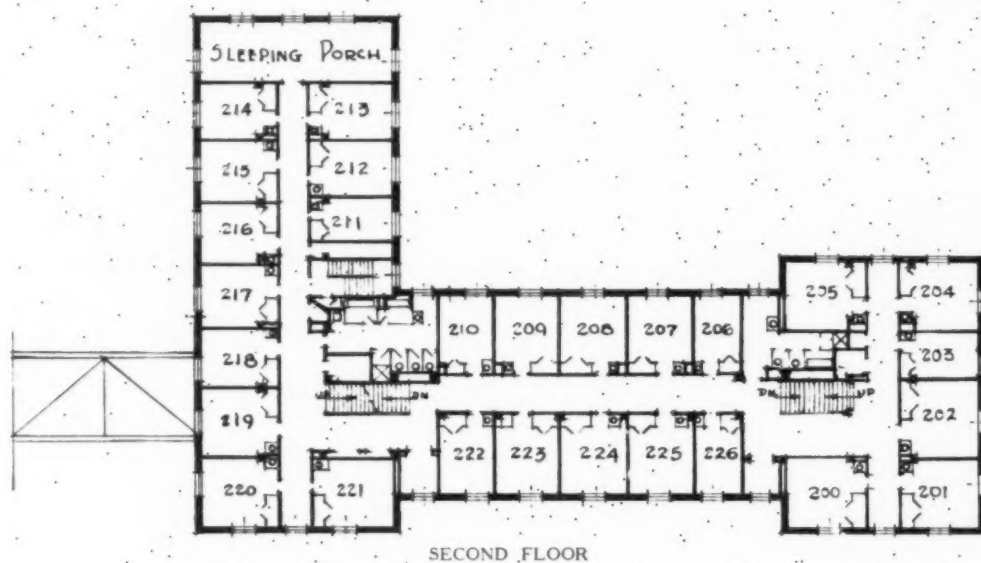
COOLIDGE, SHEPLEY, BULFINCH & ABBOTT, ARCHITECTS.



Photo. Tebbs & Knell, Inc.

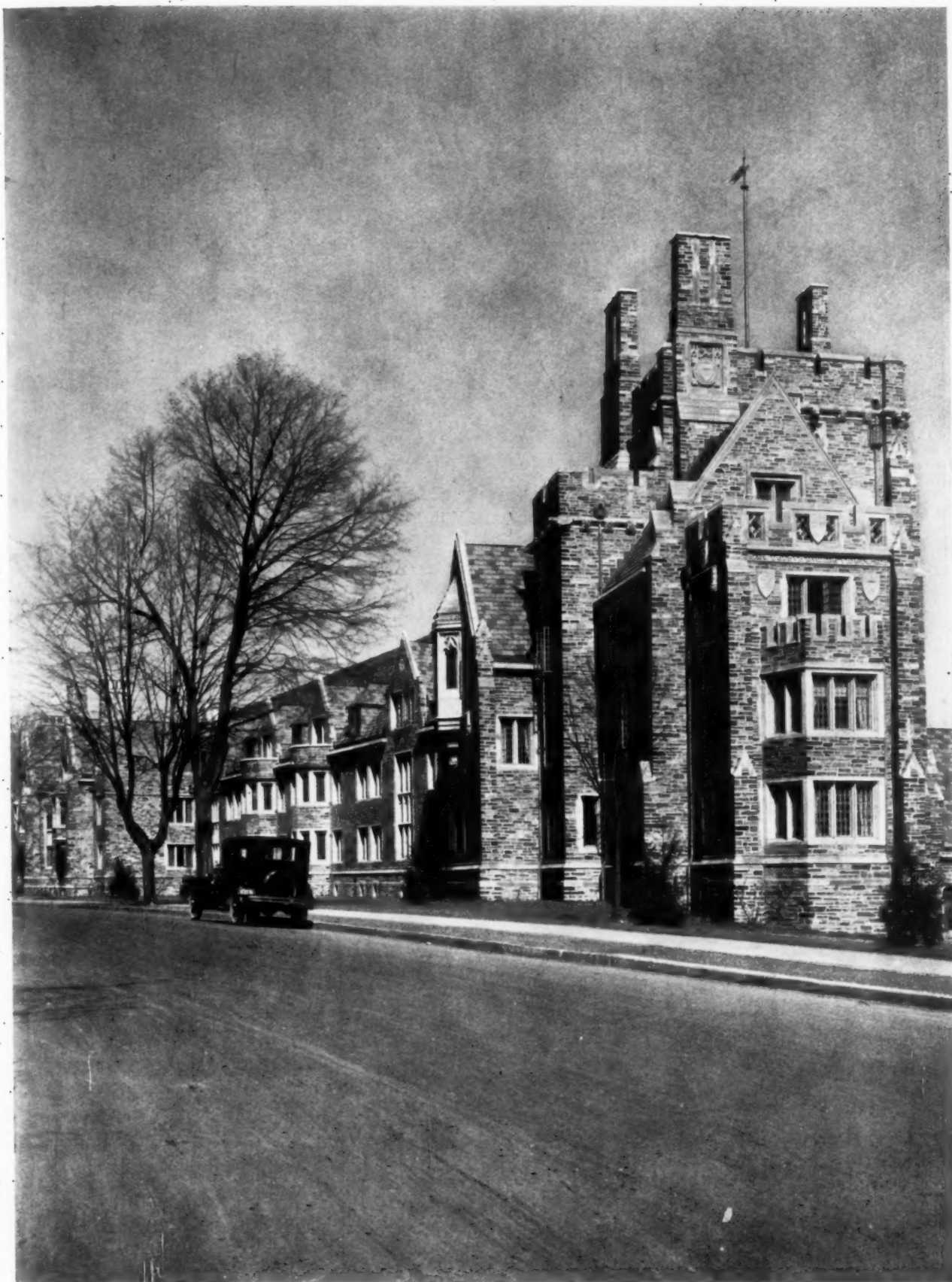
Plans on Back

WEST RESIDENCE HALL
UNIVERSITY OF ILLINOIS, URBANA, ILL.
JAMES M. WHITE AND CHARLES A. PLATT, ASSOCIATED ARCHITECTS



PLANS, WEST RESIDENCE HALL, UNIVERSITY OF ILLINOIS, URBANA, ILL.

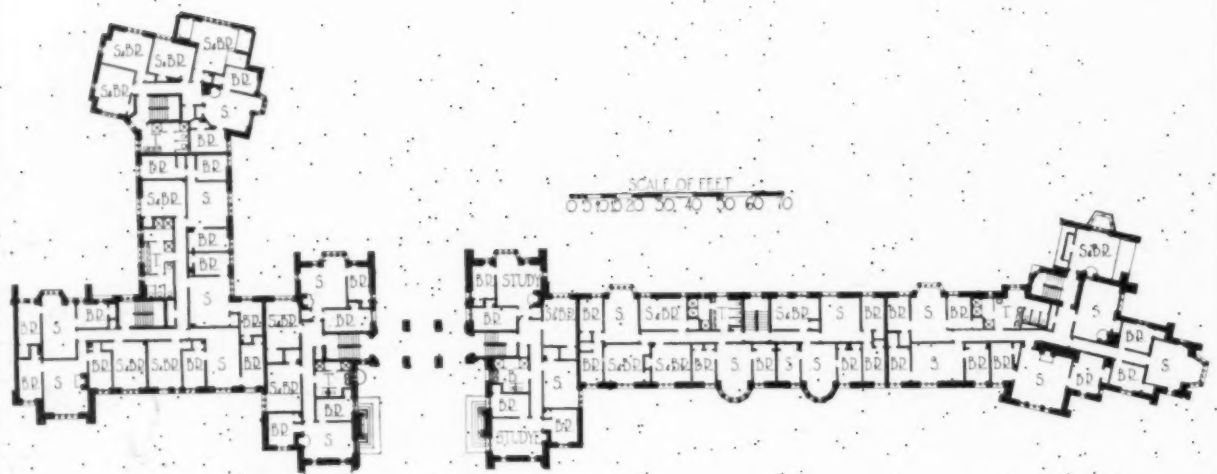
JAMES M. WHITE AND CHARLES A. PLATT, ASSOCIATE ARCHITECTS



Photo, John Wallace Gillies

Plans on Back

GROUP OF DORMITORIES
PRINCETON UNIVERSITY, PRINCETON, N. J.
ZANTZINGER, BORIE & MEDARY, ARCHITECTS



FIRST FLOOR

PLANS, FOULKE AND HENRY DORMITORIES, PRINCETON UNIVERSITY, PRINCETON, N. J.

ZANTZINGER, BORIE & MEDARY, ARCHITECTS

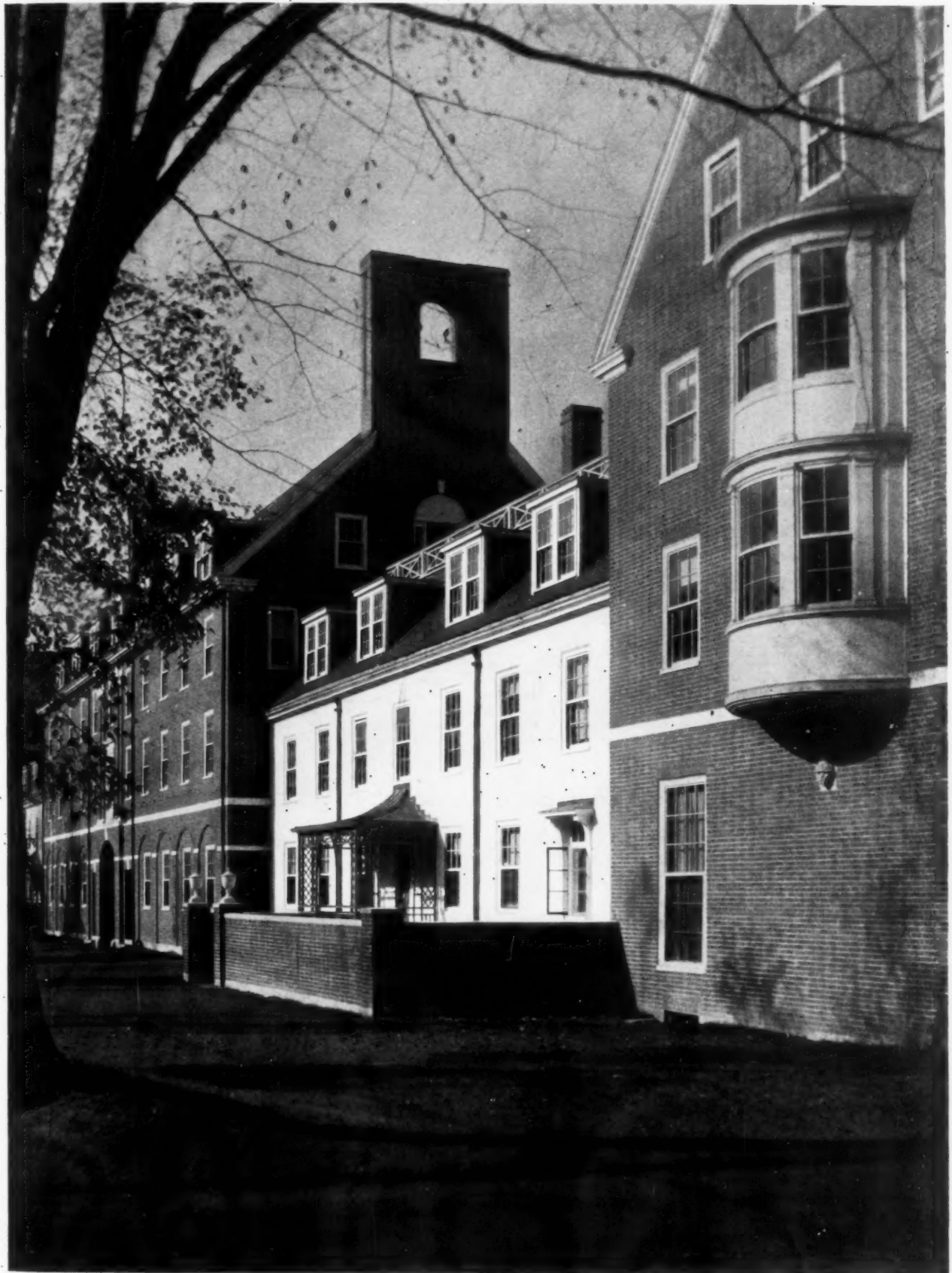
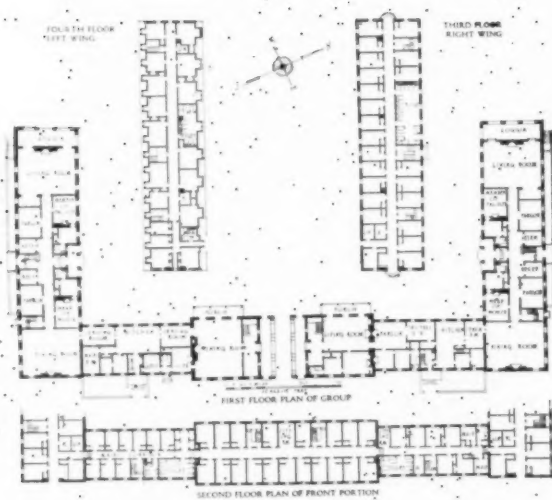


Photo. Paul J. Weber

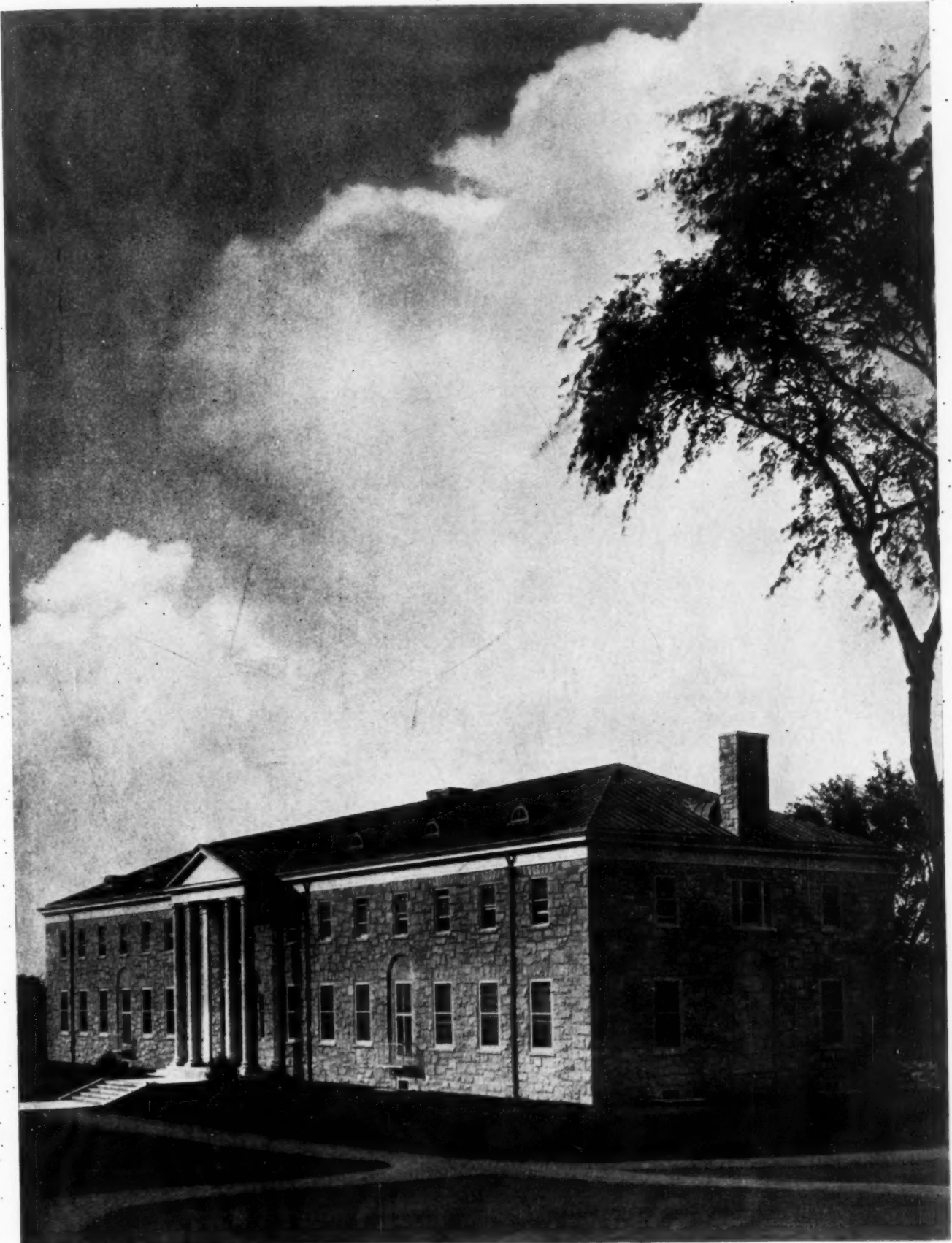
DORMITORIES, SMITH COLLEGE, NORTHAMPTON, MASS.
J. W. AMES, K. S. PUTNAM AND E. S. DODGE, ARCHITECTS

Plans on Back



PLANS, DORMITORIES, SMITH COLLEGE, NORTHAMPTON, MASS.

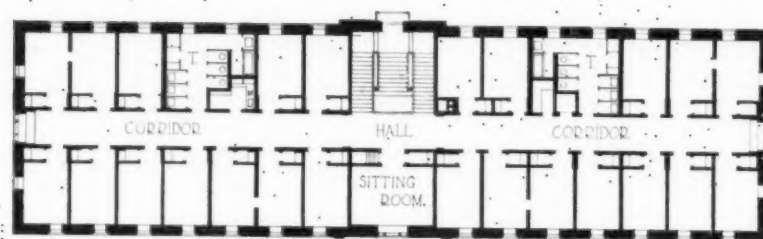
J. W. AMES; K. S. PUTNAM & E. S. DODGE, ARCHITECTS



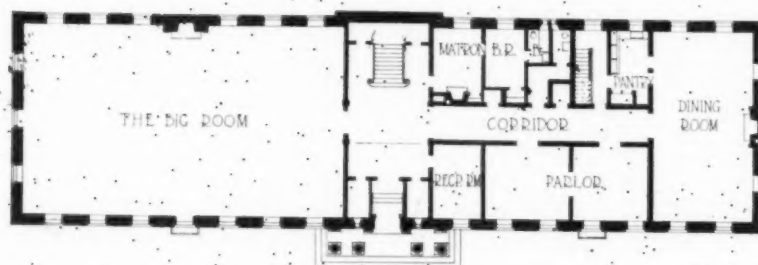
Photo, Sigurd Fischer

Plans on Back

COLONIAL HOUSE, CONNECTICUT COLLEGE FOR WOMEN, NEW LONDON, CONN.
HERBERT R. LOUD, ARCHITECT



SECOND FLOOR

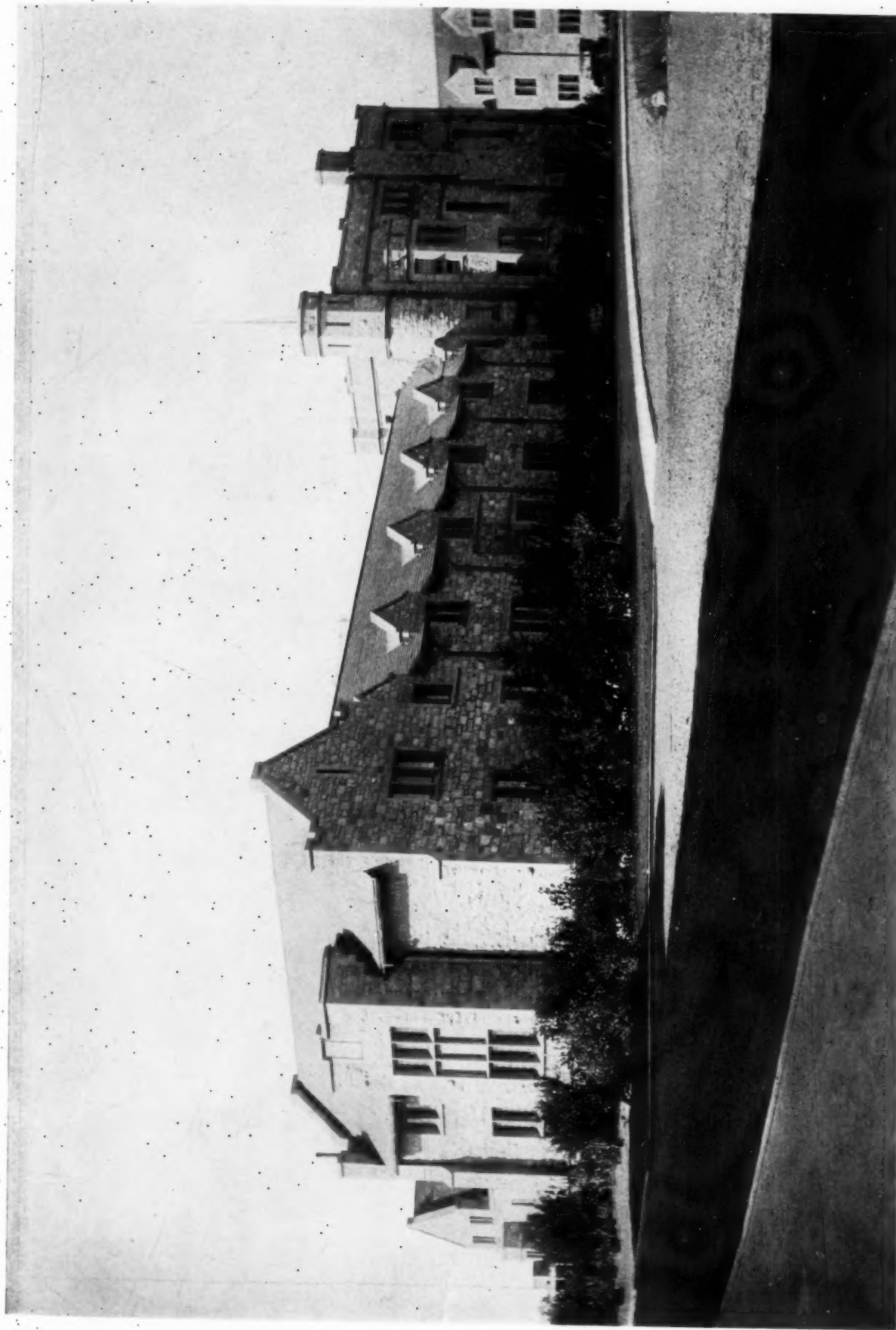


SCALE OF FEET
0 5 10 15 20 30 40 50

FIRST FLOOR

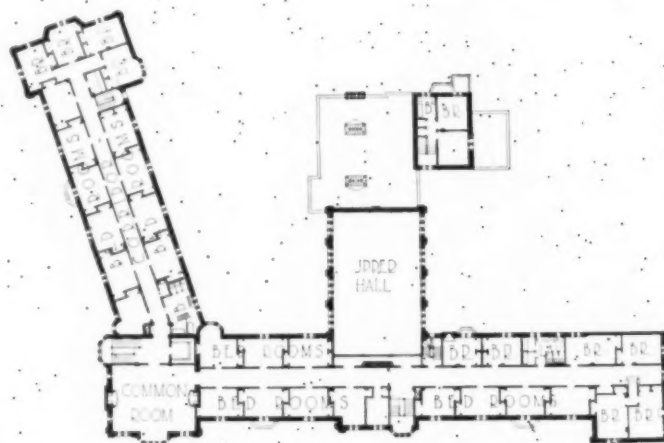
PLANS, COLONIAL HOUSE, CONNECTICUT COLLEGE FOR WOMEN, NEW LONDON, CONN.

HERBERT R. LOUD, ARCHITECT

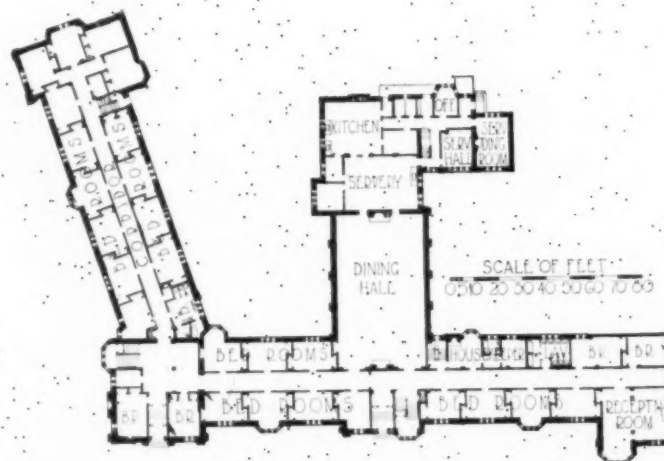


Plans on Back

STUDENTS' RESIDENCE
UNIVERSITY OF SASKATCHEWAN, SASKATOON, CANADA
DAVID R. BROWN & HUGH VALLANCE, ARCHITECTS



SECOND FLOOR



FIRST FLOOR

PLANS, STUDENTS' RESIDENCE, UNIVERSITY OF SASKATCHEWAN, SASKATOON, CANADA

DAVID R. BROWN & HUGH VALLANCE, ARCHITECTS

College Club and Fraternity Buildings

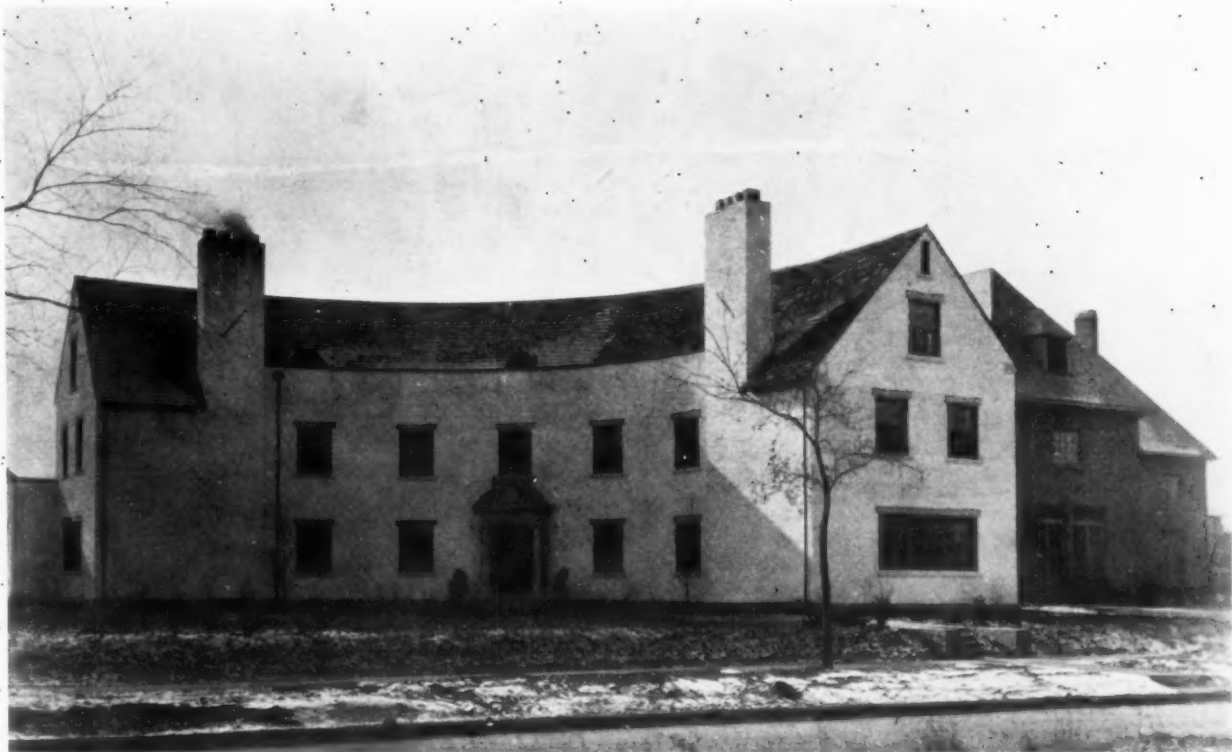
By MARY A. ROLFE

THERE exist two distinct university policies so far as fraternities and sororities are concerned. In the schools where these organizations found an early foothold, largely because they helped to solve the housing problem and in a sense set the standard for rooming houses and social usage, each organization soon acquired a house of its own, first by rental and then later by purchase or building. During the last ten years most of the chapters so started have very largely increased their active memberships, so that larger quarters have become necessary. This has led to an extensive building program throughout the country. Fortunately, the national organizations had foreseen this development, and many years ago started building loan funds. These funds, together with the increase in the number of alumni, and in their wealth, have made possible the rapid building of new houses. These houses are being constructed on land owned by the fraternal organizations and are built with an increasing freedom from university oversight. This policy of relaxed supervision on the part of the authorities is due to the fact that the organizations now number among their alumni architects who through four years of experience learned the needs of fraternity house living and who are anxious to benefit by all the advice that they can obtain. It is these trained-by-experience architects who are responsible for the present policy of securing comfort and convenience as the

first essentials, although the arrangement of the study rooms is in part due to the regular publishing by the universities of fraternity house grade averages. The fraternity is very important in university life.

The second policy is somewhat different. In those schools that were able to furnish dormitory facilities for a large number of their students, the fraternity and sorority developed as wholly social organizations within the dormitories. When the demand for permission to have their own homes came, it was discountenanced until the need of additional dormitory facilities and the rise in the costs of building materials caused the authorities to look kindly upon the proposal. In most of these schools the plan has been followed of permitting the fraternal organizations to build on specified land, either on land held in their own names but bought under university jurisdiction so that the location might be controlled, or on land owned by the university and kept in its name but rented year by year to the organization. In the latter case, the university underwrites the building contracts. Money for the buildings is raised through the national loan funds and the alumni as in the first case, outlined in the preceding paragraph.

Northwestern University is following the second policy. Some ten years ago it began the construction of the fraternity house group on the north campus. Fifteen of these houses have been completed and occupied, and the plan has been found so successful



Psi Upsilon House, University of Illinois, Urbana, Ill.

Frank T. Kopley, Architect



Phi Kappa House, University of Illinois, Urbana, Ill.

Benson & Son, Architects

that James Gamble Rogers has been retained to design 14 sorority houses for the south campus. These will be constructed of stone and will cover a block and a half of land in the heart of Evanston, adjoining the present campus. The cost, including the land, will be approximately \$2,000,000. The plan for building is that the University rents the land, the organization raises at least one-quarter of the amount needed for building, and then the University underwrites the bonded indebtedness by guarantee. The balance due is paid in the form of yearly rental to the University, and thus the mortgage notes are gradually taken up. The architect consults with representatives of the different organizations, so that he can meet their needs as to sizes and arrangement of rooms, while yet keeping the parts in accord with the whole. This of course involves a liberal policy.

Socially, there are advantages and disadvantages in each policy; architecturally, there is no doubt but that the close grouping of houses all of the same type leads to more beauty and offers a finer problem to solve than does the heterogeneous, scattered building brought about under the older policy. It is also to be noticed that where a university has selected a type of architecture which it purposes to follow in its future building program and has completed some new buildings of that type, the fraternal organizations are increasingly likely to select designs in accord with the university type. Sometimes, where the architect is an alumnus of the organization, the building may be built after a design conceived by him when in his young, just-after-graduation days he

traveled in Europe. Thus Scottish castles, English country houses, Italian villas and French *chateaux* may live again near our campuses, almost always shorn of many of their old-world accessories which cannot be reproduced with the limited means at the architects' disposal. Where an architect is employed who has had no connection with the university, he is very likely to follow the suggestion of the university architect that he build after the chosen style and get his materials from the same sources. Alumni who have become familiar with the campus plans of the university while students will also sacrifice their individual desires to the general scheme in the expectation that the day will come when the university campus will reach out and join hands with the land on which their fraternity houses at present stand.

Planning Fraternity and Sorority Buildings

Because architects who have lived in fraternity houses or else those who through being members of architectural faculties or through residence in university towns have become familiar with the needs of such buildings are very largely being employed as the designers of the new buildings, these houses are being planned primarily for comfort and convenience rather than for display. In fact the tendency away from the "individualistic" and toward the "common" type on any given college or university campus is very marked—the type being that which has been chosen as the future "university" type. This merging of each social unit into the whole is reflected in the keener interest being felt in the interiors of the houses—in finer



Delta Phi House, University of Illinois, Urbana, Ill.

Cervin & Horn, Architects

woodwork, more interesting doorways and fireplaces, more and larger bathrooms, etc., and in other ways.

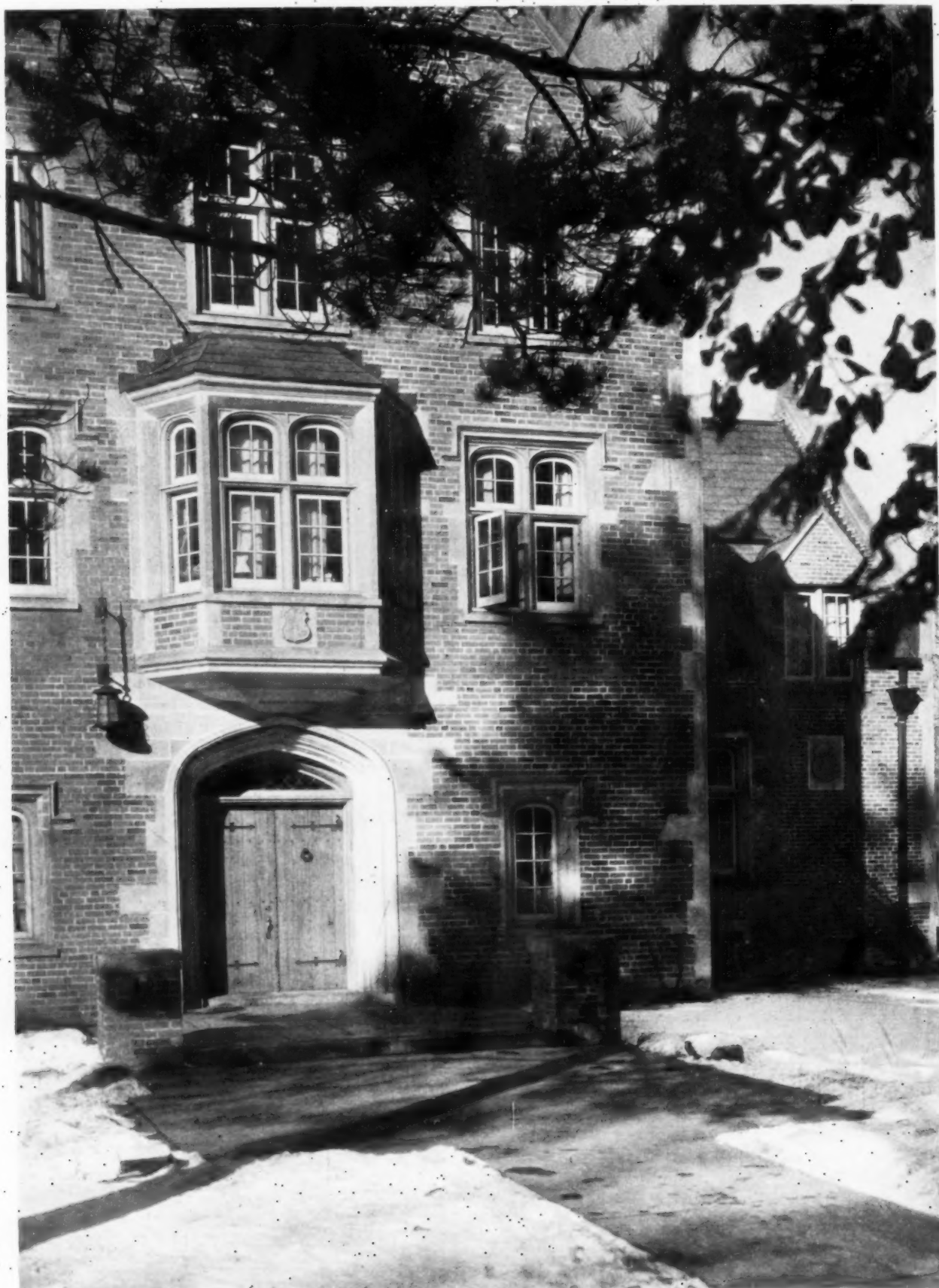
The present tendency in planning seems to be to have one large living room,—large enough to accommodate from 40 to 50 members and their guests, with one or more smaller rooms opening off or opening in series from it. These rooms are on the same floor level, and have wide openings or French doors between them, so that they can be opened up for dancing. It has been found that it is much more economical to design the houses with this purpose in view than to rent halls for the dances, and it is certainly far more pleasant. The dining room is often across the hall from the living room, and is so arranged that it can be made to enlarge the dancing space. Because it is thus designed to serve a double purpose, there is likely to be a fireplace in the dining room as well as in the living room. In a number of fraternity houses alcoves form parts of the dining rooms. These connect with the serving pantries, and are used for serving refreshments during dances. The general plan of the main floor of a house should include an appropriate place for the orchestra which will be required for dances. Sometimes this is a space in the main hall; sometimes it is on a balcony, and again in the reception room, according to the arrangement as well as the sizes of the rooms.

In order to save the trouble of arranging the rooms for meetings, and also in order to have the archives near by, many of the new fraternity houses are being built with their chapter rooms in the basements, with the fireproof safes in the same rooms or in adjoining

rooms or corridors. This arrangement permits the routing of the houses to go on as usual in spite of the fact that meetings are being held in the chapter rooms. It also permits the calling of meetings at only short notice, because there is no need for rearrangement or adjustment of furnishings. Some of these chapter rooms are without windows, thus returning to the primitive secret society's idea. These have, instead of the suction air currents common with the old pueblo Indian *kiva*, which served the purpose of ventilation, the most approved fan ventilating systems and other apparatus known today.

Sleeping quarters in these fraternity buildings are usually at the tops of the houses or divided into two or more sections occupying the corners of the buildings. These are large rooms, fitted with double-deck beds. Most of these dormitories are unheated, and house rules demand that the windows shall be kept open day and night. In a few of the newer houses a fan ventilating system keeps the air in the dormitories moving at all times. In such buildings the windows may be closed during storms. The placing of the dormitories up under the roofs prevents the entrance of rain unless the wind is strong.

The better houses are building their study rooms for two people, with two closets or built-in wardrobes. Experience has taught that more than two students in a room cannot do good work. These rooms are of fair sizes, well lighted and ventilated, and furnished with desks and chairs. They are not lounging rooms, and therefore they do not have couches, easy chairs, etc. Living rooms, card rooms,



Photos, Telbs & Knell, Inc.

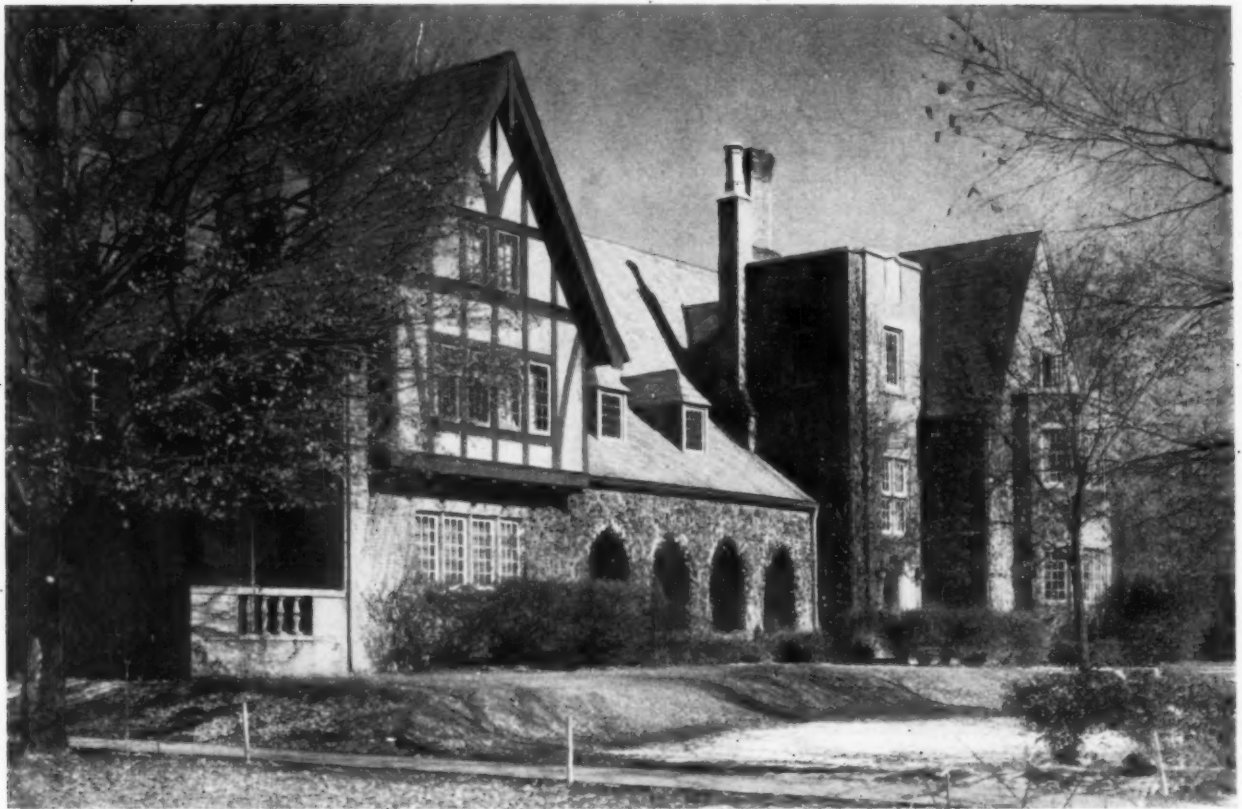
DETAIL, ENTRANCE, ALPHA DELTA PHI HOUSE, UNIVERSITY OF ILLINOIS, URBANA, ILL.
VARNEY RANDALL, ARCHITECT



Photo, Paul J. Weber

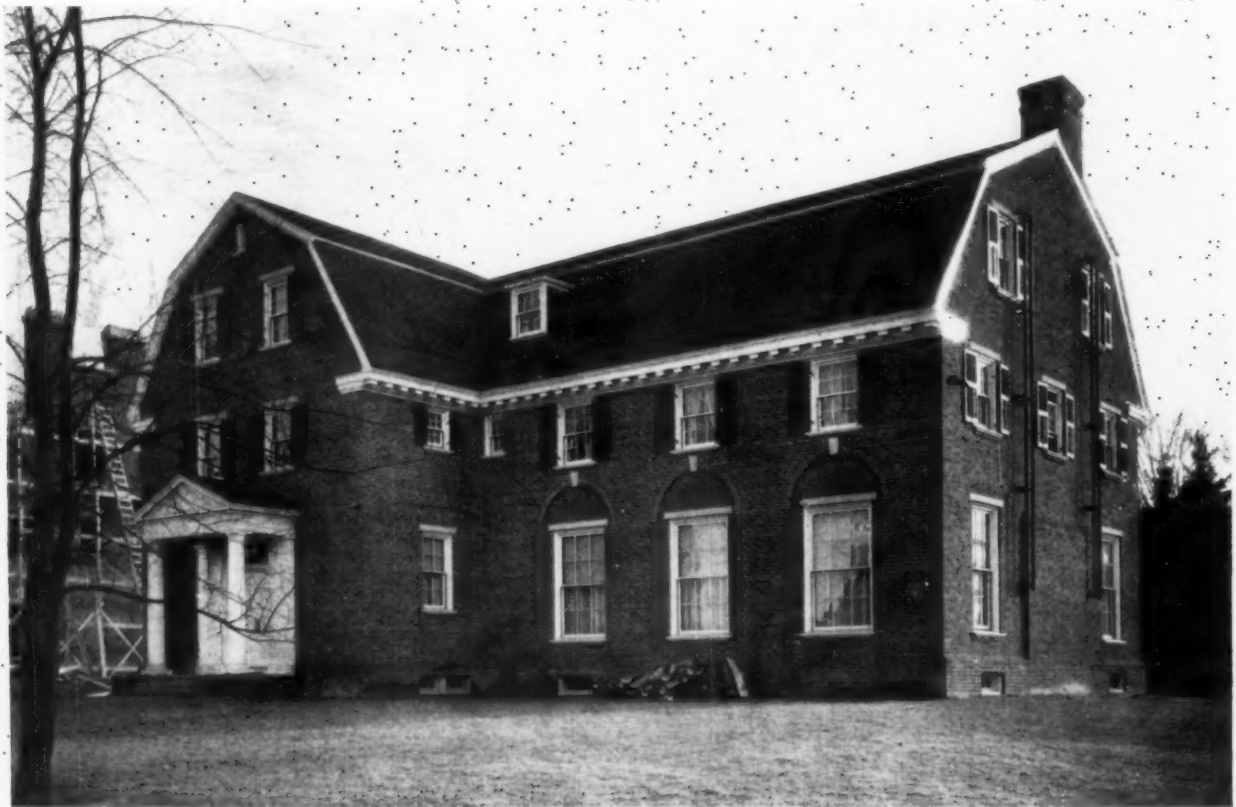
DETAIL, ENTRANCE, SIGMA NU HOUSE, DARTMOUTH COLLEGE, HANOVER, N. H.

LARSON & WELLS, ARCHITECTS



SIGMA PI HOUSE, UNIVERSITY OF ILLINOIS, URBANA, ILL.

J. W. Royer, Architect



DELTA TAU DELTA HOUSE, DARTMOUTH COLLEGE, HANOVER, N. H.

BLACKALL, CLAPP & WHITTEMORE, ARCHITECTS

music rooms, libraries and sun parlors are open to those who do not wish to study. Women's houses often have upstairs living rooms also. Small study rooms are provided near the telephone booths, so that students operating the telephones may work while on duty. Systems of bells summon the persons wanted, and the number of rings tells them whether they are telephone or doorbell calls. Some of the houses provide special single study rooms for the president and secretary, so that they may be alone for conferences and may work without interruption when they can be free for work.

Bathrooms have a tendency to be split up, each in two or three units,—wash room, shower room, and toilet room. A fraternity house built for 32 members will have as many as ten wash bowls, with other facilities in proportion. Tubs for bathing are seldom found in the new houses, except off from the guest room, the hospital room, or the chapter's room. A number of the houses vary the ceiling heights, having high ceilings for important living rooms, but lower ceilings for the dining rooms and smaller living rooms. Sometimes this is made possible by going down a step or two to the living room; sometimes by putting the dining room in the basement, where it makes a convenient lounging and refreshment room during dances, and is convenient in other ways.

Guest rooms for alumni and parents are provided in all the new houses. If these are on the first floor, they also occasionally serve as dressing rooms for the girls who attend the parties. When the guest

rooms are on the upper floors, dressing rooms for visitors are provided on the first floors or on the landings leading to the second floors. Chapters having many non-resident members also provide rooms for them. Such a room will contain study tables; lockers, etc., for the use of the members between classes. Valet or pressing rooms of fireproof construction are provided by some of the houses. Hospital rooms with bathroom facilities are also provided, so that those having colds and minor ills may be cared for until the patients are ordered to the hospital. In sorority houses and in some fraternity buildings a suite of rooms is provided for the "house mother." Sometimes her bathroom also serves as the guests' bath. In women's houses her suite is conveniently located near the head of the stairs leading to the second floor, or else off the main hall on the first floor.

Most of the newer fraternity houses are of fireproof or semi-fireproof construction, and are built to last. The bathrooms are finished in tiles or marble, and the halls and sun parlors are paved with tiles, which are often very beautiful, with composition tiles, or else are laid with hardwood floors, according to the type of house. The hardware used is generally strong, and the woodwork simple and durable. Ornament is used at only a few well chosen points, and the walls are not covered with inferior paintings. When new furnishings are bought, an effort is made to buy objects in keeping with the type of the house and of kinds that have proved to be of lasting worth. This makes for consistency.



Lounge, Sigma Nu House, Dartmouth College, Hanover, N. H.

Larson & Wells, Architects

The building of garages adjacent to fraternity houses is simply not done. This is in part due to lack of funds, and in part due to the movement against the use of automobiles by students. No provision is made for space for them in locating the houses on the lots, and their use is discouraged.

A real effort is being made to secure lots of adequate sizes for the houses, and to landscape what space there is and keep it in order. Much pride is shown in trees, hedges and shrubbery, and these receive a great deal of attention from the members and "pledges" or prospective members. The older organizations that foresaw the need for larger quarters and purchased lots years ago have, naturally, the larger areas. There is a decided tendency on the part of the younger organizations to buy farther away from the active center of the campus in order to get larger plots of land. They also try to buy adjacent to the newer portions of the campus, in order to gain the advantage of the open spaces in front of their houses which will be thus provided.

The majority of the new houses which are built independently of the universities at which they are located, seem to be costing about the same amounts—from \$60,000 to \$80,000. Here and there the cost is only \$40,000; and now and then it runs up to \$100,000. As a rule, these more expensive houses are not any larger than are those costing less. The increased cost is due to more costly stone construction or to use of finer interior finish, or to both. The cost price to the fraternity does not, however, repre-

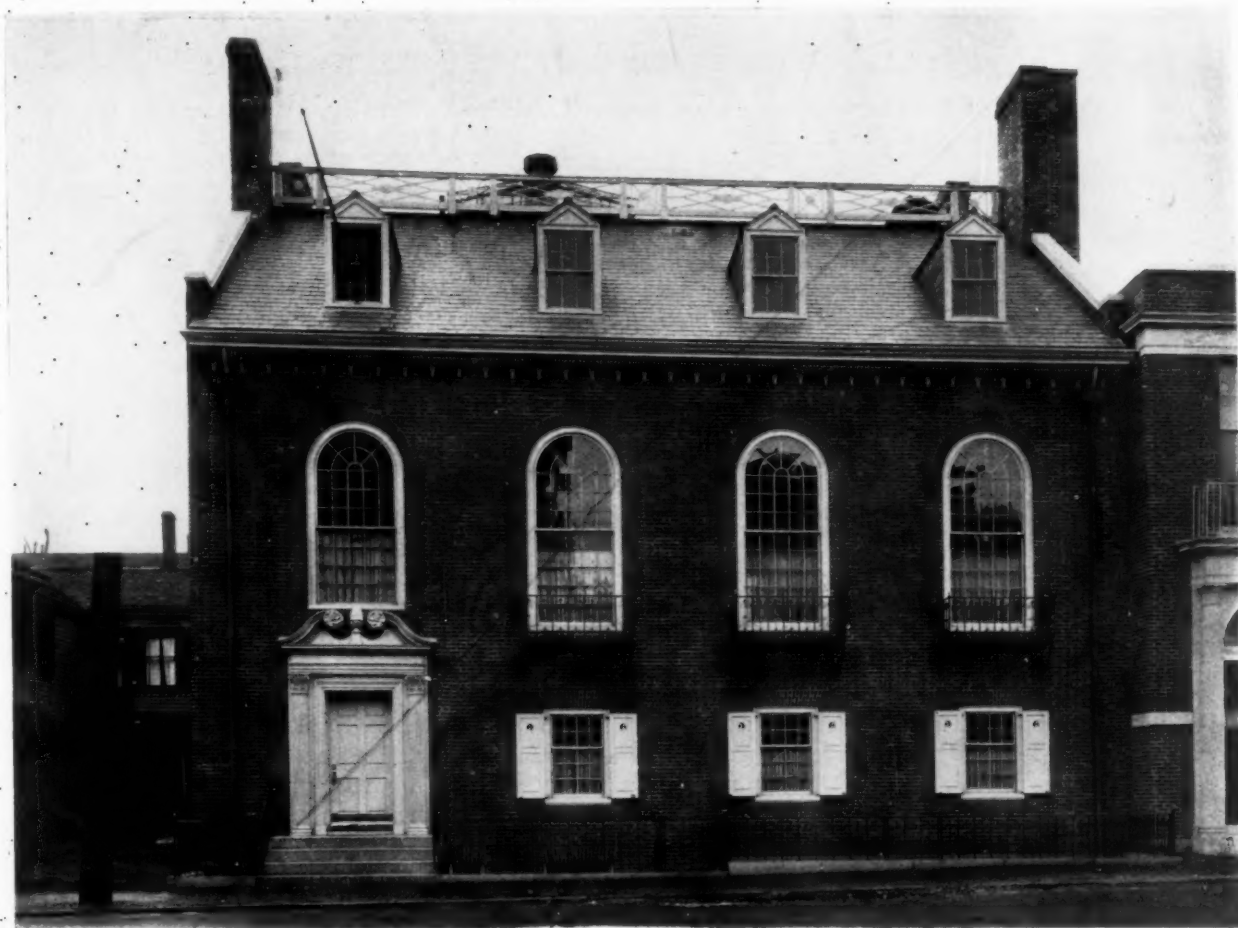
sent the building's actual cost; since every house so built receives help from its alumni members in different professions or lines of business. Perhaps it is the architect whose services are donated, or those of the contractor or the supervisor or (as in one house of which I have knowledge) the materials were given at cost. This house paid a price over cost for no material save the steel beams used in the construction. It did, however, pay for its architect's service. One of the members supervised the building, which cost about \$80,000. The value of the structure is therefore far above its actual cost price. These houses are generally planned for from 35 to 50.

There seems to be a very real tendency to build the plan of the house around a single object,—generally a gift from someone. In one instance it was an ancient Scottish door knocker which caused the design of the house to be Scottish. In another instance, two beautiful Italian vases established the scheme of the hall. In another case an overmantel was built to include a rare painting. All sorts of objects are thus made the shrines around which the houses are designed, and as a rule the thought which is thus necessitated has produced something beautiful and distinctive. Fraternity and sorority houses are centers about which there often cluster fond recollections, and frequently they exercise a powerful appeal upon former residents. Often, too, they receive gifts which frequently add greatly to the interest of their buildings, and have even been known to determine the entire character of new structures.



Loungé, Kappa Kappa Kappa House, Dartmouth College, Hanover, N. H.

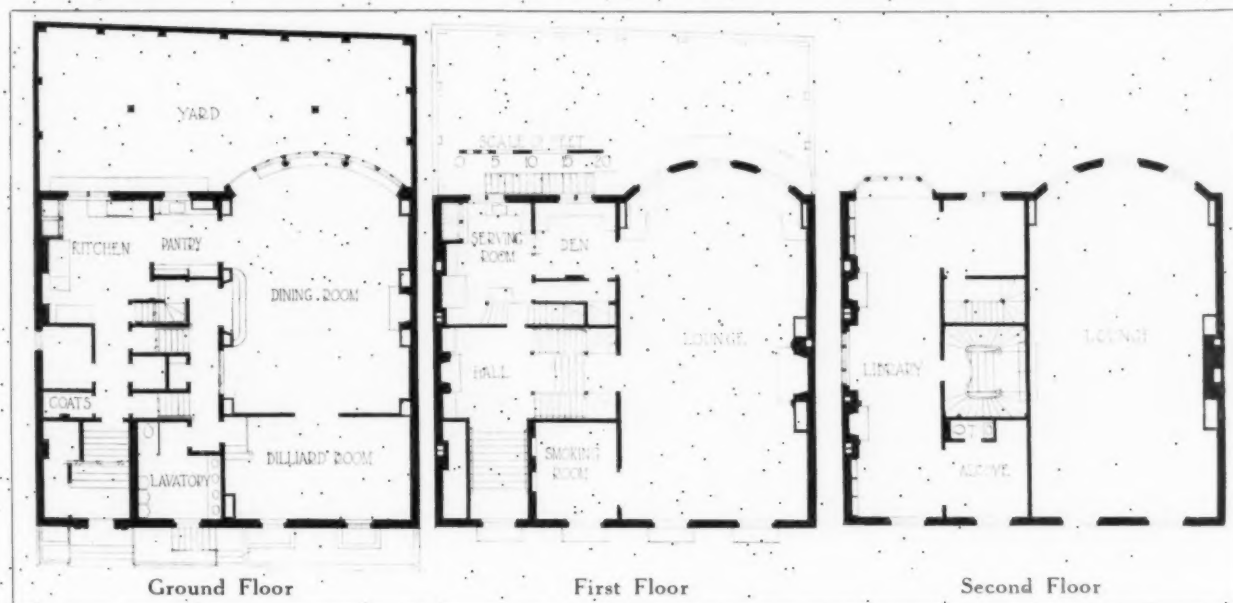
Larson & Wells, Architects



S. K. CLUB, HARVARD UNIVERSITY, CAMBRIDGE, MASS.
COOLIDGE & SHEPLEY, ARCHITECTS

A SUCCESSFUL example of the use of Colonial architecture for college and fraternity clubs is that of the S. K. Club House in Cambridge. The exterior design shows a two-story brick facade in which the entrance door is located at the end of the building, directly under one of the four tall arched win-

dows which mark on the exterior the location of the living room within. Below these windows, the lower floor or basement rooms are indicated by small, rectangular windows with white painted wooden shutters and small panes of glass. Rain water leaders with ornamental leader heads make strong lines



FORUM SPECIFICATION AND DATA SHEET—72

S. K. Club House, Cambridge, Mass.; Coolidge & Shepley, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and wood, slow-burning.

EXTERIOR MATERIALS:

Brick with limestone and wood trim.

ROOF:

Slate.

WINDOWS:

Wood frame and sash; double-hung.

FLOORS:

Wood.

HEATING:

Hot air.

PLUMBING:

Enameled iron fixtures.

ELECTRIC EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Oak.

INTERIOR WALL FINISH:

Smooth plaster.

DECORATIVE TREATMENT:

Walls and trim painted.

APPROXIMATE CUBIC FOOTAGE:

117,580

COST PER CUBIC FOOT:

24 cents.

YEAR OF COMPLETION:

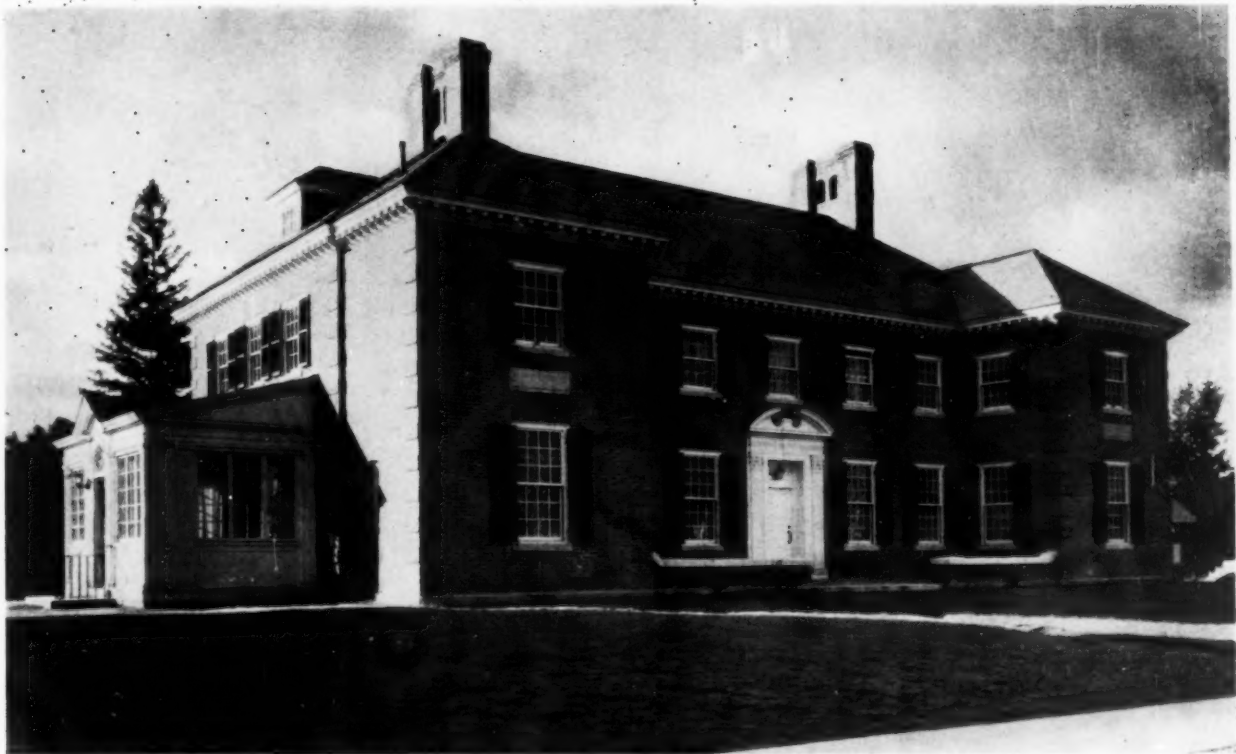
1916.

of demarcation at either end of this main façade. The plans show a convenient arrangement on the ground floor of dining room and billiard room, with adjacent kitchen and pantries, coat room and lavatory. The main floor shows a large lounge which extends through the entire building from front to rear. On this floor, there are also a den, smoking room and serving room, the latter connected by dumbwaiters with the kitchen below. The main hall

and double stairway form one of the architectural features of the building. Half of the second floor is taken up by the upper part of the lounge, which is two stories in height. The long, narrow library, extending the full length of the building, has two fireplaces and two spacious alcoves, one on the front and another at the rear. The plans of the building, as a whole, are interesting and unusual, as well as practical and convenient for the purpose it serves.



Rear View



SIGMA NU HOUSE, DARTMOUTH COLLEGE, HANOVER, N. H.

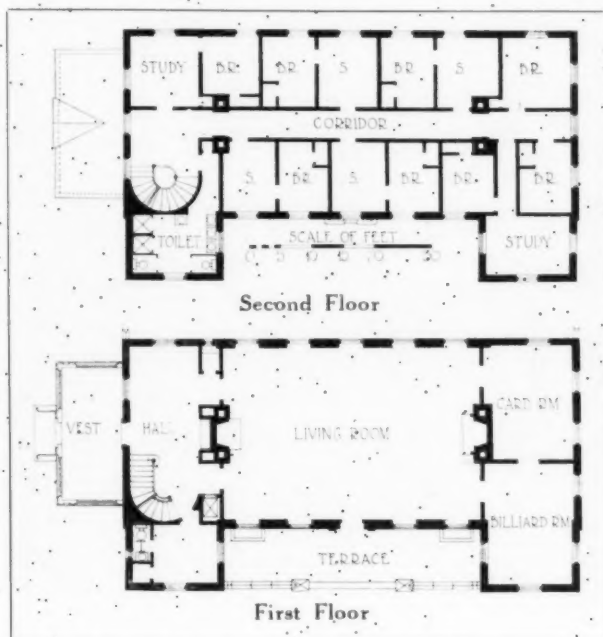
LARSON & WELLS, ARCHITECTS

AMONG the many excellent examples of fraternity house architecture completed in the last two years, that of Sigma Nu at Dartmouth College must be placed near the top of the list. The building represents a conscientious and successfully studied adaptation of Georgian architecture. The scale of the detail suggests the Renaissance architecture of England rather than its Colonial counterpart in the United States. The front elevation shows two projecting bays, which terminate a narrow, brick-paved

terrace across the center of the front. The relative scale of windows, the size of the panes of glass and the detail of the entrance doors are among the many features which confer architectural distinction.

One of the interesting features of the plan of this house is the location of the entrance hall and vestibule at one end instead of at the center of the building. This arrangement makes it possible to place a large and well proportioned living room at the center of the house, with windows on two sides and a fireplace at each end. This living room is immediately accessible from the entrance hall, where a fine circular staircase adds to its Georgian spirit and charm. The projecting bay at the entrance end of the house is occupied, on the first floor, by a large coat room and lavatory. Opening off the entry way between the hall and living room are located on one side, the telephone closet, and on the other the dumbwaiter. At the end of the house opposite the entrance hall, the first floor plan shows a card room and a billiard room, each of which opens off the living room. The main hall is reached through a spacious vestibule or glassed-in porch. This arrangement is particularly adaptable and desirable in such a climate as that of Hanover, where winters are long and severe. The details of this entrance porch show the same refinement and study as does the rest of this building.

The second floor plan shows a balanced arrangement of 14 bedrooms, practically equal in size. Above the coat room and lavatory on the first floor, a large washroom with showers and toilets is located. This adequately takes the place of individual bath-



FORUM SPECIFICATION AND DATA SHEET—73

Sigma Nu House, Dartmouth College, Hanover, N. H.; Larson & Wells, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and hollow tile; wood stud partitions and floor joists; slow-burning construction.

EXTERIOR MATERIALS:

Brick with painted wood trim.

ROOF:

Slate.

WINDOWS:

Wood frame and sash; double-hung.

FLOORS:

Marbleoid, basement and toilets; white oak, first floor and clear maple for upper floors.

HEATING:

Vapor steam.

PLUMBING:

Cast iron and brass piping; enameled iron fixtures.

ELECTRIC EQUIPMENT:

Lighting and cooking connections.

INTERIOR MILL WORK:

Plain oak, first floor; elsewhere, stained pine.

INTERIOR WALL FINISH:

Plaster, painted.

DECORATIVE TREATMENT:

Walls painted, and trim painted and stained.

APPROXIMATE CUBIC FOOTAGE:

94,800.

COST PER CUBIC FOOT:

45 cents.

DATE OF COMPLETION:

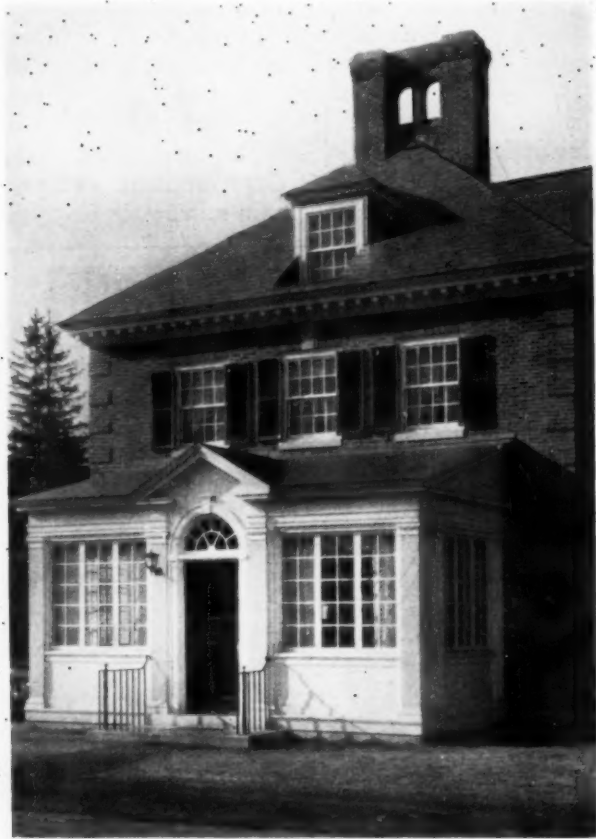
September, 1925.

rooms, which would have occupied much of the space on this floor now available for bedrooms. The main staircase continues up to the third floor or attic, which is lighted by a number of dormer windows. This floor contains three additional bedrooms and a large assembly room designed for special fraternity occasions. In the basement are located a laundry, large trunk room, boiler room and coal storage space, as

well as a good sized room to be used as a living room. Study of this building shows that its strikingly pleasing qualities are the result of infinite care taken in working out the details of plan and design. It would be difficult indeed to find a fraternity building more distinguished or more notable for its quiet good taste and architectural reserve. It is a structure of which its architects may well be proud.



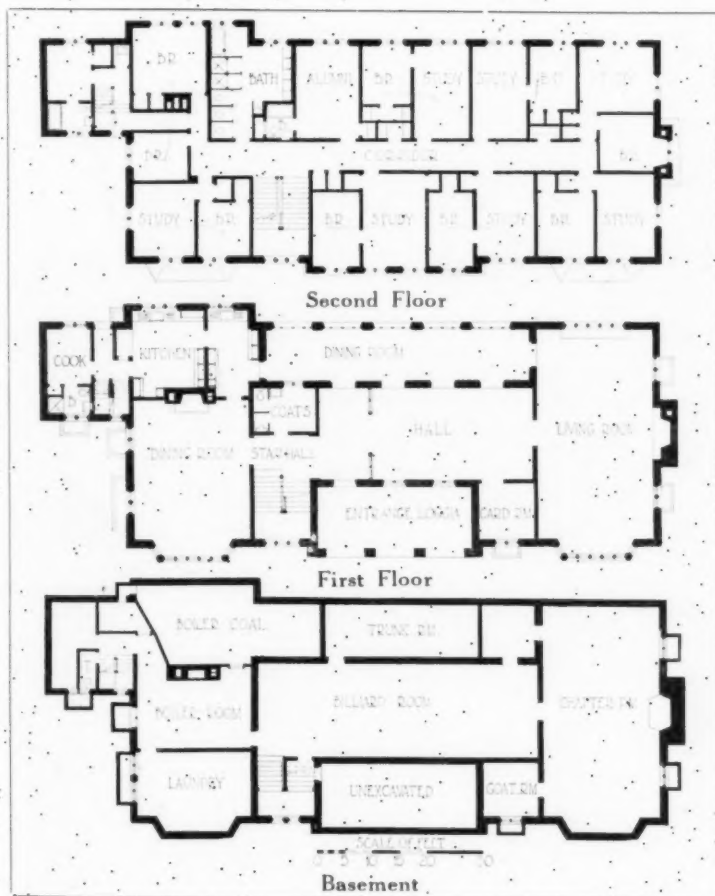
Terrace Entrance



Main Entrance



PHI DELTA THETA HOUSE, UNIVERSITY OF ILLINOIS, URBANA, ILL.
HOWARD VAN DOREN SHAW, ARCHITECT



A FRATERNITY house of outstanding architectural importance is that of Phi Delta Theta at the University of Illinois. Built of local limestone laid random, a simple adaptation of Elizabethan architecture has been successfully used. The length of the building is broken on the front facade by two gables which balance a central entrance bay composed of an open porch with square piers on the ground floor and windows above. The parapet of this bay happily breaks the long line of eaves. The design, as a whole, successfully and adequately interprets the purpose and use of the building, which has the semblance of a private house with the added formality of a balanced design in keeping with the dignity of one of the leading college fraternities. At one end of the building, a tall chimney provides a picturesque terminal feature which adds to the architectural character of the structure. The rear or garden facade gives an even better idea of the purpose for which the building is intended. The end gables, which balance those of the front facade, are carried through to the rear, where one gable is brought out slightly from the body of the house to give contrast and relief to the otherwise unbroken wall surface. Five

FORUM SPECIFICATION AND DATA SHEET—74

Phi Delta Theta House, University of Illinois, Urbana, Ill.; Howard VanDoren Shaw, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Reinforced concrete; roof, frame.

EXTERIOR MATERIALS:

Limestone trimmerl with cut stone.

ROOF:

Random slate.

WINDOWS:

Metal easements.

FLOORS:

Black terrazzo in dining room; hall and living room, oak; upper floors, concrete; toilets and baths, terrazzo.

HEATING:

Vapor steam.

INTERIOR MILL WORK:

White oak.

INTERIOR WALL FINISH:

First floor, sand-finish plaster walls; upper floors, smooth plaster with three coats of lead and oil; Bedford stone window enframements throughout.

DECORATIVE TREATMENT:

Simple English.

APPROXIMATE CUBIC FOOTAGE:

162,800.

COST PER CUBIC FOOT:

50 cents.

DATE OF COMPLETION:

November, 1922.

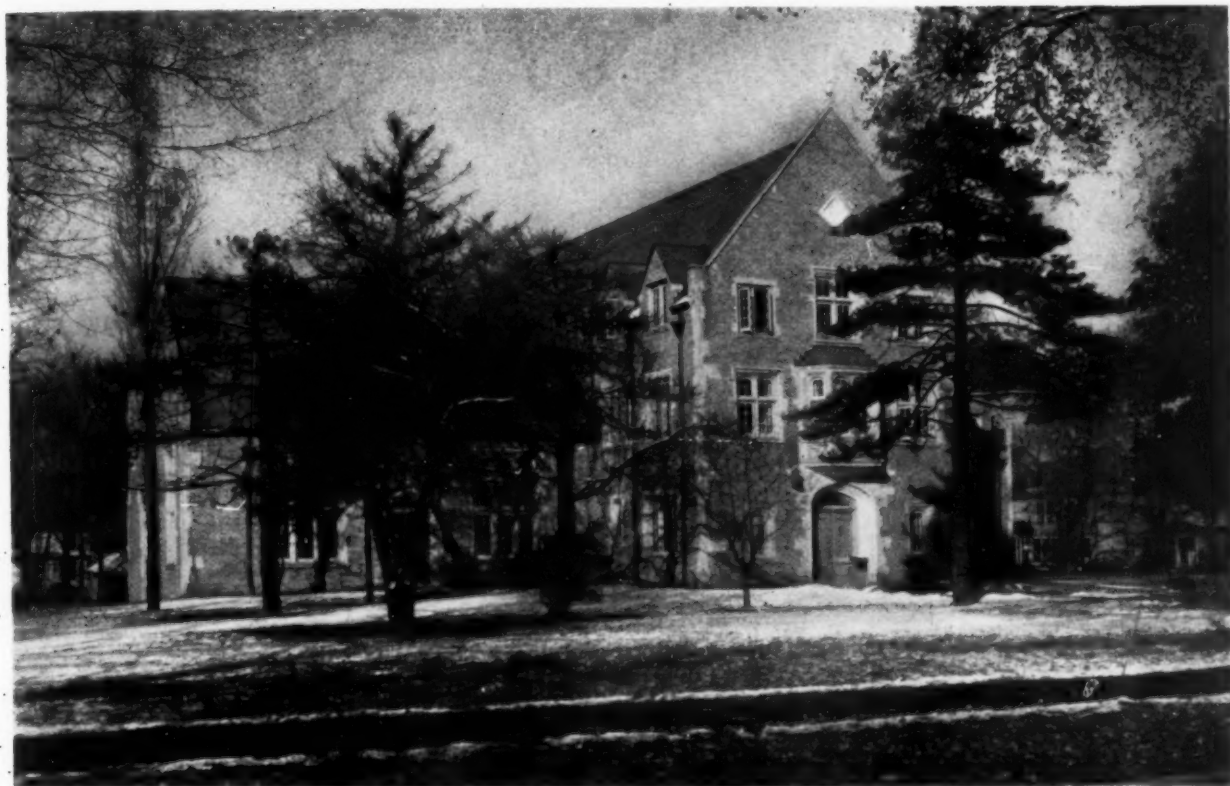
arches on the first floor mark the location of the dining loggia, which also serves as a living porch.

The first floor plan shows a spacious entrance loggia, in which is located the entrance door. This floor contains, besides a large center hall, a spacious living room across one end of the building with bay window on the street end, and a card room, coat room, lavatory, and dining room with serving pantry and kitchen adjacent on the other end. The plan is simple and straightforward and is as balanced in arrangement as the exterior design. The second floor, reached by a wide staircase, contains nine bed-

rooms, most of which connect with separate studies; an alumni room, and a housekeeper's room and bath. Each bedroom is sufficiently large to accommodate two single beds. One large dressing room with showers and toilets serves all the bedrooms on this floor. The third floor has rooms to be used as combination studies and bedrooms, a store room, a general dressing room and bath, and a large dormitory accommodating 13 beds. A door at the rear of this dormitory connects with the servants' stairway at the end of the building. These bedrooms are all well lighted by carefully designed triple dormer windows.



Rear View



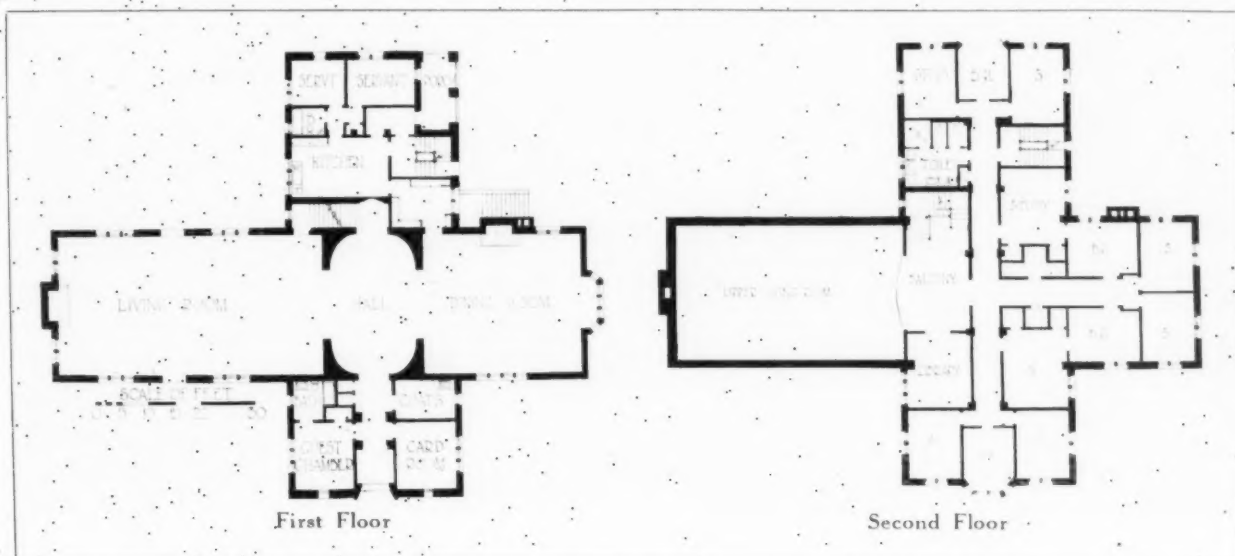
ALPHA DELTA PHI HOUSE, UNIVERSITY OF ILLINOIS, URBANA, ILL.

RALPH W. VARNEY, ARCHITECT

ENGLISH collegiate architecture executed in brick with limestone trimmings is used for this spacious fraternity house. The design, resembling more that of a large parish house than that of a club, owes much of its charm to the wide range of color given by the brick of which its walls are built.

The cross shape of the building permits an interesting layout of rooms. Entering from one of the short arms of the cross, a guest room and bath are balanced on the opposite side of the vestibule by a card room, back of which is a large coat room. A short passageway leads from the entrance door into

a large center hall, somewhat oval in shape. Large openings give access from this center hall to the living room on one side and the dining room on the other. These two rooms and the center hall occupy the main part of the cross plan. The remaining or top arm of the cross contains, besides a main stairway, a pantry connecting with the dining room, service stairs and two servants' bedrooms and bath. The living room is a story and a half high with rafters and ridgepole exposed. The stone-faced fireplace as well as the mullioned windows and diamond panes gives English charm and atmosphere to this



FORUM SPECIFICATION AND DATA SHEET—75

Alpha Delta Phi House, University of Illinois, Urbana, Ill.; Ralph W. Varney, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Fireproof.

EXTERIOR MATERIALS:

Red-face brick with limestone trim.

ROOF:

Slate.

WINDOWS:

Wood casements; mostly leaded glass on first floor.

FLOORS:

Dining room, red concrete with black border; kitchen and upper floors, finished concrete; remainder of first floor, wood.

HEATING:

Steam.

ELECTRICAL EQUIPMENT:

Lighting; special wrought iron fixtures for first floor.

INTERIOR WALL FINISH:

Walls of living room and wainscot of dining rooms in brick; living room ceiling of pecky cypress; other surfaces plaster.

APPROXIMATE CUBIC FOOTAGE:

185,000.

COST PER CUBIC FOOT:

38 cents.

fraternity house. In fact, the entire design and treatment of this fraternity building is carried out in a rather simple adaptation of the English Tudor style.

The second floor, which occupies only the arms and top of the cross, contains a balcony overlooking the large living room, a small library, four bedrooms and eight studies. This arrangement calls for the use of two beds in each bedroom and an individual study for each man. No individual bathrooms are

connected with the bedrooms or studies. Instead, one large dressing and toilet room is provided for the use of this entire floor. The plan of the third floor is similar to that of the second, providing four bedrooms and eight studies. The height of the building as well as the design and size of the living room wing fails to give any suggestion of a semi-domestic character to the structure; but as an example of the use of the Tudor style, it is eminently successful.



Two-Story Living Room Wing

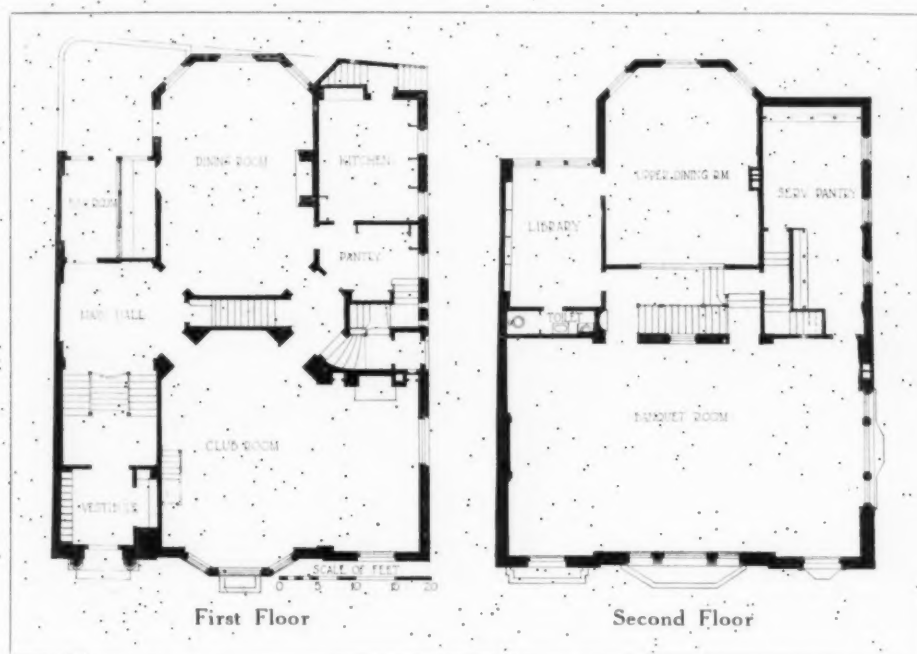


IROQUOIS CLUB; HARVARD UNIVERSITY, CAMBRIDGE, MASS.
WARREN & WETMORE, ARCHITECTS

ADJACENT to the S. K. Club, on one of the narrow streets in Cambridge, is located the building of the Iroquois Club. Unlike the building of the S. K. Club, this design shows a studied use

of the details of the Adam period of the English Renaissance. Here again, the size and arrangement of the windows of the two street facades indicate quite clearly the arrangement and importance of the

rooms within. The entrance door, located at the street level, leads into a marble paved vestibule and stair hall. Here a double stairway leads up to the main floor, while below five steps connect with the basement, where are located a coat room, boiler room, and at the rear a storage cellar, laundry, large toilet room and two servants' bedrooms and bath. On the main floor are located a large living room and a spacious, two-story dining room. At the rear of this floor, adjacent to the dining room, is a small bar, reminiscent of pre-prohibition days, as this



FORUM SPECIFICATION AND DATA SHEET—76

Iroquois Club House, Harvard University, Cambridge, Mass.; Warren & Wetmore, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and frame.

EXTERIOR MATERIALS:

Brick; wood and marble trim.

ROOF:

Slate.

WINDOWS:

Wood frame and sash.

FLOORS:

Hardwood; main rooms, teakwood in random widths.

HEATING:

Hot water.

PLUMBING:

Brass water lines.

ELECTRICAL EQUIPMENT:

Iron conduit for lighting.

INTERIOR MILL WORK:

Oak.

INTERIOR WALL FINISH:

Painted.

DECORATIVE TREATMENT:

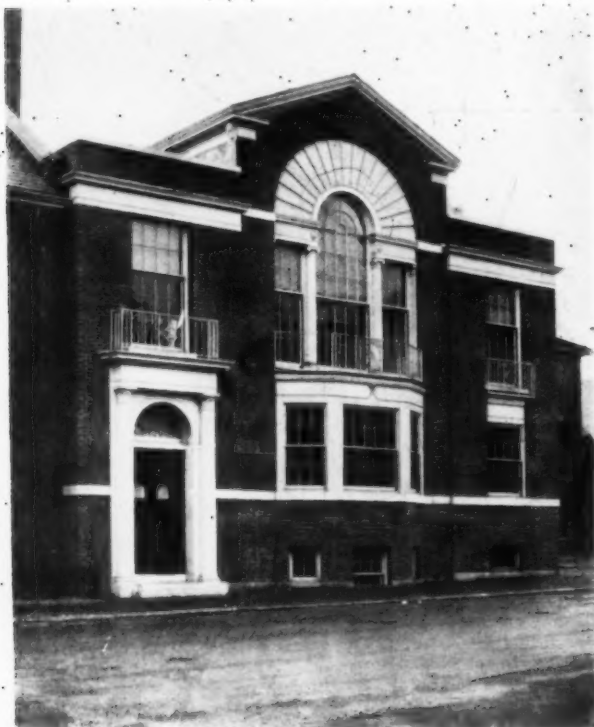
Oak and plaster in main rooms.

YEAR OF COMPLETION:

1917.

club house was built in 1916. The serving pantry and kitchen are located at the side of the dining room opposite the bar. A small center hall between the living room and dining room gives access to a stairway leading to the second floor. Here a banquet room, 45 feet long by 27 feet wide occupies the entire front of this floor. At the rear is a library, a gallery overlooking the two-story dining room, and a large serving pantry, which is arranged as an auxiliary kitchen. These kitchens are completely equipped. The plan of this Iroquois Club House is typical of this type of undergraduate club buildings to be found in universities where clubs rather than fraternities exist. Unlike fraternity houses, most college club

houses provide no sleeping quarters for their members. This characteristic is particularly true of the club houses at Harvard. While a club inevitably lacks something of the domestic atmosphere of a fraternity house, in which the members actually live, the absence of bedrooms, baths, etc., makes possible a dignified, somewhat formal treatment of living rooms, dining rooms, and other rooms of a general nature. So in this instance, since owing to the nature of the building it has been possible to give it a highly architectural form of English Renaissance treatment, with windows of a scale and character which accord well with the style. The building presents a distinguished aspect.



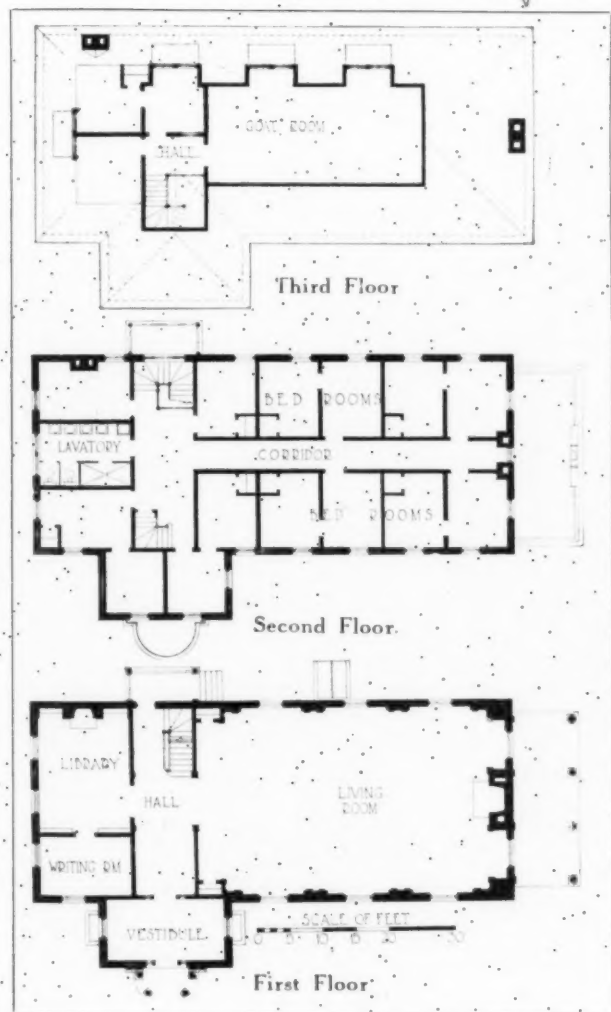
Front Elevation



Detail of Entrance



KAPPA KAPPA KAPPA HOUSE, DARTMOUTH COLLEGE, N. H.
LARSON & WELLS, ARCHITECTS



APPROPRIATE to the New England antecedents and background of this New Hampshire college, the Colonial style of architecture has been pleasingly employed as inspiration for the design and details of the Kappa Kappa Kappa House at Dartmouth. As an example of a small fraternity house, this is one of the best. Two stories in height, built of red brick with brick corner quoins, the white painted porches, small paned windows, trim and simple cornice, make a pleasing impression. The front elevation shows a semi-circular entrance porch, employing the Corinthian order, located in the center of the projecting bay at one end of the facade. Three long casement windows with white painted shutters indicate the location of the large living and dining room, which is the heart of the house. At the end of this living room, a covered porch gives a decorative note, which adds much to the exterior design of the building. The use of simple Tuscan columns with sturdy entablature and roof parapet is so pleasing and successful that it is rather to be regretted that this same order was not employed for the semi-circular entrance porch, which seems too delicate and refined in character for use at the entrance to an undergraduate fraternity house. The simple and successful dignity of the exterior of this building is further maintained by the unbroken slopes of the hip roof on the front elevation. In plan, the first floor shows, besides the large living room, a stair hall extending through the entire building, a library and a writing room. On the second floor are located 14 bedrooms of equal size, and a general toilet and washroom, placed at one end of the long corridor.

FORUM SPECIFICATION AND DATA SHEET—77

Kappa Kappa Kappa House, Dartmouth College, Hanover, N. H.; Larson & Wells, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and hollow tile; wood stud partitions and floor joists; slow-burning.

EXTERIOR MATERIALS:

Brick and hollow tile.

ROOF:

Slate.

WINDOWS:

Wood sash and casements; double-hung.

FLOORS:

Basement and toilets, composition; first floor, plain oak; elsewhere, soft pine.

HEATING:

Steam.

PLUMBING:

Cast iron and brass piping; enameled fixtures.

ELECTRICAL EQUIPMENT:

Lighting and cooking connections.

INTERIOR MILL WORK:

Basement in oak; first floor, whitewood; elsewhere, hard pine.

INTERIOR WALL FINISH:

Painted plaster.

APPROXIMATE CUBIC FOOTAGE:

93,800.

COST PER CUBIC FOOT:

40 cents.

DATE OF COMPLETION:

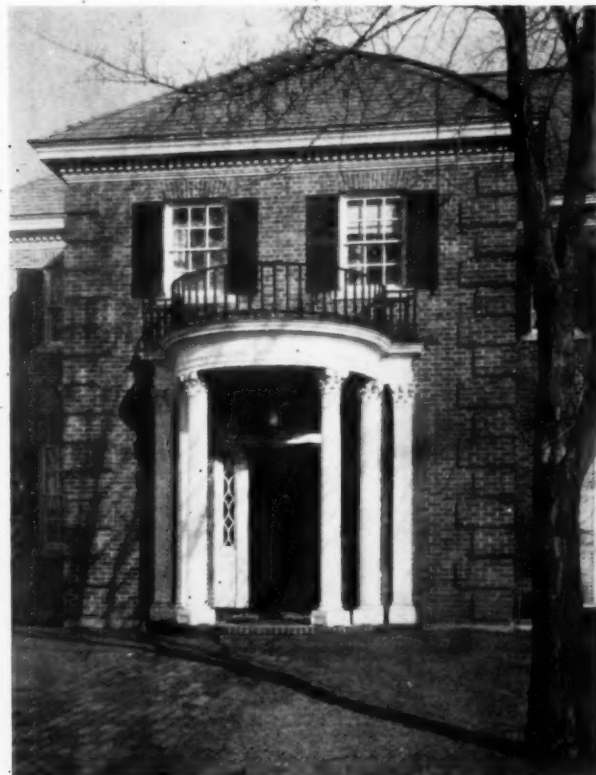
June, 1923.

The carefully designed, white painted wooden trim,—columns, cornices and shutters,—of the exterior suggest that equal thought and care have been devoted to designing the trim for the interior. This has been done, and the rather late Colonial style in which the exterior of this fraternity house has been designed, is carried out within by mantels, pilasters, wainscots and the newels and balusters of the stairway, which are true to the forms the eighteenth century American builders were using, following the details invented or adapted by the architects of Eng-

land. The grace and delicacy with which the interiors of this building have been developed may be studied in the illustration at the lower left-hand corner of this page. Here, at one end of the great living room are two deep alcoves wherein windows are set. Between the two is placed the chimney-piece, with a recessed panel in lieu of an overmantel. This chimney-piece is flanked by pilasters which support the heavy cornice extending around the room. The interior well fulfills the promise of the graceful, polished exterior of this highly satisfying building.



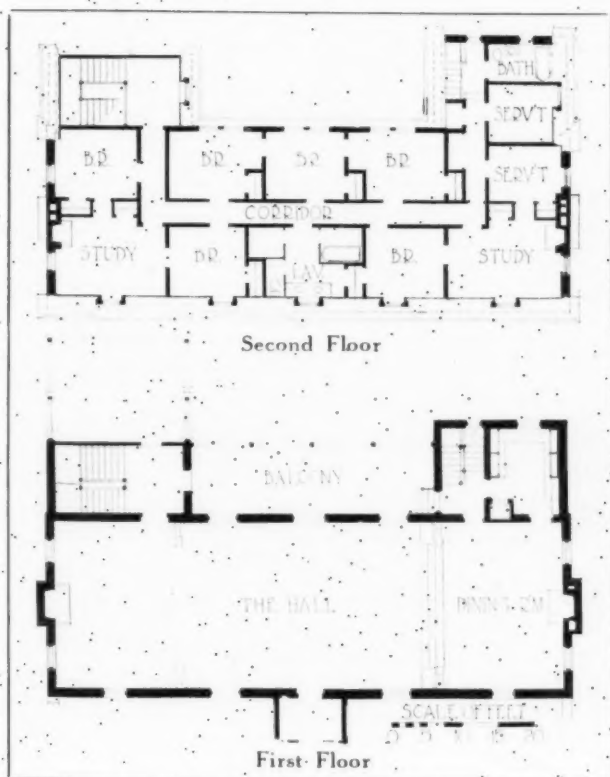
Living Room



Main Entrance



D. U. CLUB, HARVARD UNIVERSITY, CAMBRIDGE, MASS.
R. CLIPSTON STURGIS, ARCHITECT



ANOTHER of the interesting club house designs found in Cambridge, Mass., is that of the D. U. Club, which, although built ten years ago, ranks as one of the most unique and interesting examples of small club house architecture. The front elevation, of balanced design, is quite unusual. A long flight of stone steps leads up to a projecting entrance vestibule, Colonial in character and detail. This vestibule is balanced at the sides by unusually tall windows, which indicate the two-story living room within. A simple cornice supports the overhang of a well proportioned gambrel roof, the lower slope of which is broken by five dormer windows on each side of the house. These dormers, combined with the added height provided by the gambrel roof, make possible several bedrooms for the accommodation of visiting graduate members of the Club on the upper floor. The white painted trim and window frames successfully offset and contrast with the red Harvard brick of the walls. The Colonial effect is still further heightened by the use of white painted wooden gates and fence in front of the house. The fence is low and surmounts a 4-foot stone wall.

The locating of the building itself, some 15 feet back of the sidewalk line, and at an elevation of nearly 10 feet above the street, provides an atmos-

FORUM SPECIFICATION AND DATA SHEET—78

D. U. Club, Cambridge, Mass.; R. Clipston Sturgis, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Second-class or slow-burning.

EXTERIOR MATERIALS:

Brick.

ROOF:

Slate.

WINDOWS:

Wood-sash and frame, double-hung.

FLOORS:

Oak.

HEATING:

Steam.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Plain standing finish; ornamental screens in great hall.

INTERIOR WALL FINISH:

Plaster and wood.

DECORATIVE TREATMENT:

Painted walls; stained woodwork.

APPROXIMATE CUBIC FOOTAGE:

140,000.

COST PER CUBIC FOOT:

22½ cents.

YEAR OF COMPLETION:

1915.

phere of seclusion and retirement, particularly desirable in a club of this sort. The entire main floor of this club house is one long room, at one end of which three steps lead to a higher level, which is used as the dining room of the house. Above the dining room end and also above a space of similar character at the opposite end of the building is an open gallery with high paneled parapet, a staircase and a serving room as well as a long open balcony, which is used in the warm months of the year for out of door dining.

The character of the structure as a club house rather than a fraternity building, which is likely to contain bedrooms, makes possible an interior which is both interesting and highly architectural. The exterior agrees well with that of the older structures in the Harvard Yard, not far away, and aids in suggesting the connection which a college club might well sustain to the institution to which its members belong. Even in a town containing many notable buildings, none more distinguished is to be found.



The Hall.



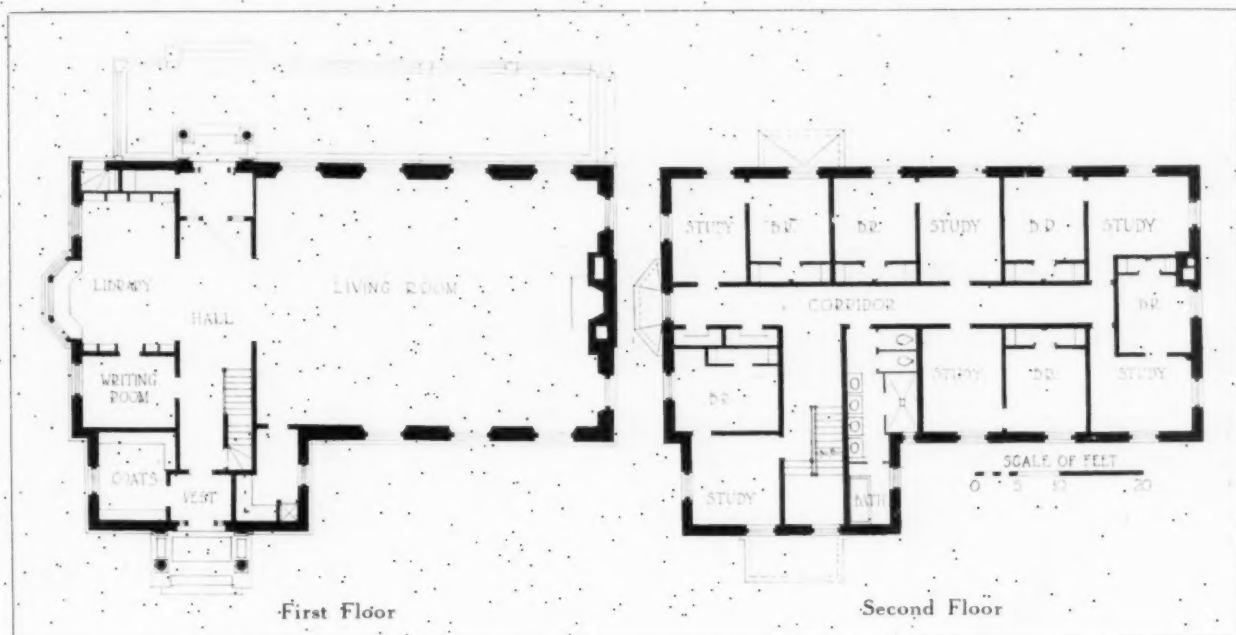
Entrance.



DELTA-TAU DELTA HOUSE, DARTMOUTH COLLEGE, HANOVER, N. H.
BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

ANOTHER of the recently completed fraternity houses at Dartmouth is that of Delta Tau Delta. This simple brick building with gambrel roof follows the Colonial style as regards the exterior details. Both the entrance porch on the front of the house with its simple entablature and low pediment, and the entrance at the rear of the main hall, which opens onto the living porch, are carried out in the Tuscan style of Classic architecture. The entrance porch on

the front of the building is located in the center of a bay which projects about 11 feet from the main building, creating a pleasing break in the length of this facade. At the right of this entrance motif three tall rectangular windows set in brick arched openings add a decorative note to the front facade of the building. A carefully proportioned window on the second floor is placed on the axis of each of the wall arches of the first story. This same deco-



FORUM SPECIFICATION AND DATA SHEET—79

Delta Tau Delta House, Dartmouth College, Hanover, N. H.; Blackall, Clapp & Whittemore, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Non-fireproof.

EXTERIOR MATERIALS:

Brick with stone and wood trim.

ROOF:

Asphalt shingles.

WINDOWS:

Wood frame and sash, double-hung.

FLOORS:

Oak and hard pine.

HEATING:

Steam.

PLUMBING:

Enameled iron.

ELECTRIC EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

White wood painted, and cypress stained.

INTERIOR WALL FINISH:

Rough-cast plaster.

DECORATIVE TREATMENT:

Simple English style; white wood painted, and cypress stained.

APPROXIMATE CUBIC FOOTAGE:

100,000.

COST PER CUBIC FOOT:

46½ cents.

DATE OF COMPLETION:

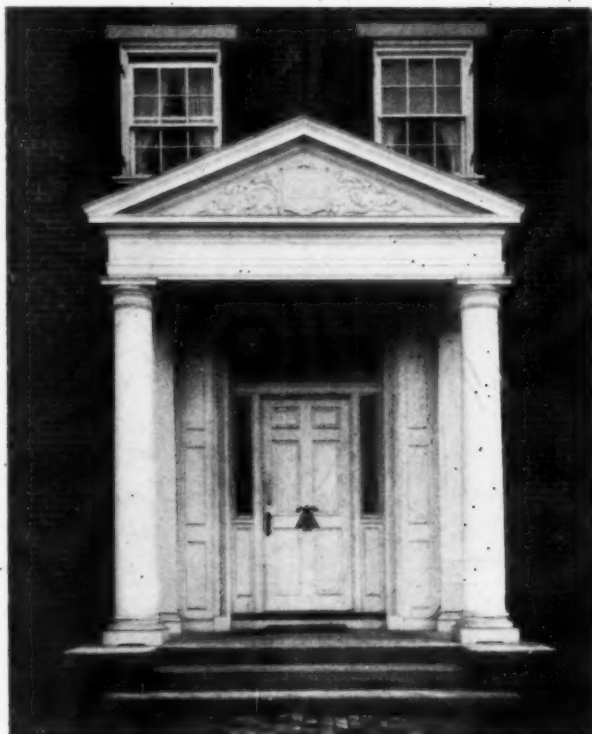
July, 1925.

rative treatment of filled-in brick arches with small windows above is repeated on the rear or garden elevation of the building. Carefully spaced, well proportioned dormers break the slope of the roof above the windows in the wall below, giving a home-like and comfortable aspect to the house. The plan is simple and direct. Rectangular in shape, the first floor provides a long center hall extending through the building. This center hall opens into a spacious living room on one side and on the other into a small library with a bay window. Other rooms on this floor are a coat room and serving room, located on either side of the entrance vestibule. This serving room

permits the living room to be used also as a dining room. At the rear of the first floor, a long, open, brick-paved terrace is used as an outdoor living room during the warmer months of the year. On the second floor are located six bedrooms and six studies, as well as a large washroom with showers and toilets. The third floor also contains bedrooms and studies, three of each, with a common washroom. Part of this floor is occupied by a room arranged for fraternity functions and ceremonies. Perhaps the most notable single detail of the exterior of the building is the excellent placing of the main floor windows, in arched recesses, a means of securing character.



Living Room



Entrance

The Designing and Planning of Stadiums

By MARY A. ROLFE

IN a paper read by Gaven Hadden, C. E., before the American Society of Civil Engineers last May, Mr. Hadden drew attention to the fact that stadiums should be built primarily for the games to be played within their enclosures. The Greek stadium, which dates from 330 B. C., and was built in the shape of a long U, was intended to provide seats for the witnessing of foot races. According to the custom of that day these races were run back and forth on a straight path until the required distance had been covered. The arena enclosed would therefore not be of the right shape or size for a stadium built for spectators of modern foot races which are run on closed tracks; much less would it be suitable for baseball or football. The Roman circus, built for the witnessing of chariot races, followed closely the Greek shape, but added a high wall surrounding the arena for the protection of spectators and a central wall dividing the first course from the return, neither of which is needed in our modern stadiums. In spite of this fact, certain stadiums have walls built around the arenas, thus cutting down the possible number of good seats,—seats within a distance from the playing field which is convenient for human eyes, since every 10 feet away from the field adds to the strain on the eyes. This enclosing wall also makes

necessary the pitching of the deck to a greater slope, since otherwise the spectators would have the near part of the field cut off from view by the seated height of those in front of them added to the height of the wall. The only other alternative is the widening of the field to make up for the space so cut off. This again reduces the number of good seats possible within the visual limit which is found convenient.

The amphitheater, built for the purpose of witnessing wild animal and gladiatorial shows, was oval or elliptical. The Yale Bowl follows the lines of the amphitheater, although the shows for which the amphitheater was designed were of a character that made any seat on any side as good as any other seat, whereas football, which is the only game played in the Yale Bowl, is played on a rectangular field. Thus the shape of the stadium makes impossible for the spectators any of the seats which are usually considered the choice seats at a football game,—the close-in, central, side seats. There are no such seats to be had when the stadium follows the lines of the Roman amphitheater. Furthermore, the enclosing wall around the arena, made necessary in the amphitheater for the protection of the spectators and for the retention of water when a sea fight was to be staged, is not needed today, even though the design



Airplane View, Yale Bowl, New Haven

Designed by Charles A. Ferry, C. E.; Architectural Details by Donn Barber



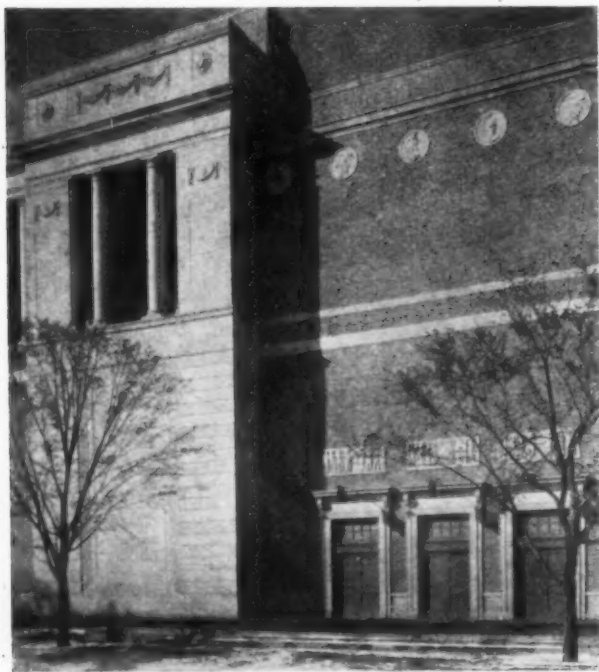
Stadium, University of Illinois, Urbana, Ill.
Holabird & Roche, Architects

of the amphitheater is retained. Fortunately, the demands of the early baseball games indicated very definitely the shape needed for baseball stadiums, so that the arrangement of the seats in permanent baseball parks has never yielded to that of the ancient stadium. Mr. Hadden showed a very interesting plan for using partially stationary and partially mov-

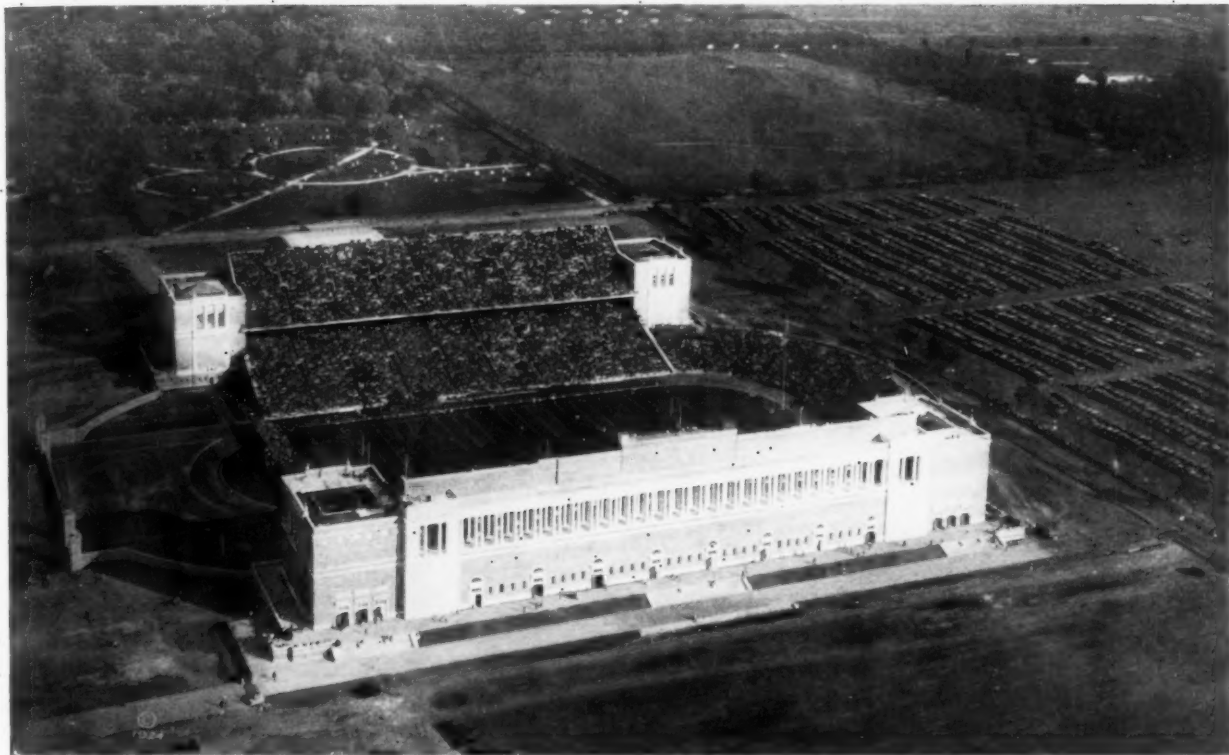
able (although permanent) seats, so that the same stadium could, by the swinging of the decks of seats on an axis, be made to serve the needs of both baseball and football. This is perhaps the best modern example of the movement away from the old stadium forms and toward forms adapted to the game for which the stadium is probably intended to be used.

With the exception of the Yale Bowl, every stadium of any importance has been designed for more than one sport. With this purpose in mind, something of the ideal for each game has necessarily been sacrificed. The addition of a running track around the gridiron means a sacrifice of large numbers of choice seats for viewing football, because of the visual limit of convenience. When, however, the stadium is built with a double deck, the added width of the field permits a lower pitch of the upper deck, and hence at Illinois the track was added, the additional deck making up for the loss of good seats due to the width. A small crowd seating itself in order to witness a game of football will form a close mass at the middle of each side and will fill the lower rows of seats, extending back up the bleachers in an inverted fan shape, keeping the distance from the center of the field about equal whether the occupied seats be along the lower tiers or upward. With this natural grouping in mind, the Cornell Crescent was built. It was intended to meet just these conditions.

The first step in breaking away from the traditional type of stadium structure was to widen the U; the second step was to flatten the curved end or ends, thus bringing the form of stadium more



Detail, Stadium, University of Illinois
Holabird & Roche, Architects



Airplane View, Stadium, University of Illinois, Urbana, Ill.
Holabird & Roche, Architects

nearly in line with the form of the gridiron. A true rectangle would not serve, because the seats in the angle would be very undesirable. The third step in modernizing the plan of the stadium was to forget the ends and to build on the sides only. While recognizing the natural plan of seating arrangement, most of these sidestand buildings have rectangular decks. While the corner seats are not as desirable as are those nearer to the center of the field, they are preferable to end seats, and when the playing is near the goal posts they are as good as any seats anywhere, provided the stands do not extend too far beyond the lines of the goal posts, which they need not do.

So long as the space under the stands is of no value for athletic purposes, the traditional architecture of the Greek and Roman buildings is likely to be retained wherever the embankment type is not used. Only where modern steel beams are used can the space below the seats be made valuable. A long central beam under the lower deck of the Illinois stadium has done away with the need of a supporting row of pillars, making possible two halls 50 feet wide and as long as the stands. These, being free from all obstructions, can be enclosed, heated and used for athletic contests, practice or sports. Open concrete arches of some type will give entrance to such areas. As soon, however, as the space is opened up by the use of steel beams, the design of the exterior must change, because the use of the halls so formed necessitates the walling in of the structure. The Illinois stadium has departed very markedly from the use of the traditional concrete in building

these enclosing walls of brick with stone trimmings, and in using an American adaptation of an English type of architecture. The arch is entirely lacking, square-topped entrance doors giving access to great halls from which entrance is made onto the decks. The use of this type of enclosure is the more definitely marked because of the placing of carving,



Detail, Franklin Field Stadium, University of Pennsylvania, Philadelphia
Day & Klauder, Architects



Franklin Field Stadium, University of Pennsylvania, Philadelphia.
Day & Klauder, Architects

tablets and plaques as they might be placed on any building, such as an auditorium. The only bit of reminiscent architecture is the use of the Roman Doric columns in the colonnade which occupies the space under the upper deck. It is to be expected that this movement away from the use of the classical types will continue, since it proves advantageous.



Entrance, Memorial Field, Dartmouth College,
Hanover, N. H.
Larson & Wells, Architects

In considering the plan of a stadium the points to be considered are: (1) the allotment of land on which to build; (2) the purpose for which the stadium is designed; (3) the seasons when the different sports for which it will be used are played; (4) the approximate sizes of the crowds at different seasons; (5) the direction of the wind and the position of the sun at those times of the year and during the hours of the day when the games will be played; (6) the sources from which the crowds will come, whether local or from the surrounding country or from long distances; (7) approaches necessary to accommodate the crowds; (8) parking spaces necessary for cars; (9) the weight of the crowd when seated, when moving or when standing suddenly; (10) the weight of the material used in construction; (11) the force of the wind, and (12) the safety of the people. All this has to do with "planning for crowds" and each detail is of considerable importance.

The first point will inevitably make a great difference in the plan. Illinois, with 40 acres on which to build, and Pennsylvania, with only a narrow strip between two streets, would necessarily use different plans. Illinois could use the space under the decks for athletic purposes, while Pennsylvania was happy to be permitted to extend its decks out over the sidewalks of the streets on either side, forming arcades. Illinois had no limit to the width of deck that necessarily restricted it, while Pennsylvania's sidelines were restricted by the shorter width between the playing field and the outer edges of the arcade. As a consequence, Pennsylvania had to do without some of the best seat locations, owing to these limitations.



Memorial Field Stadium, Dartmouth College, Hanover, N. H.

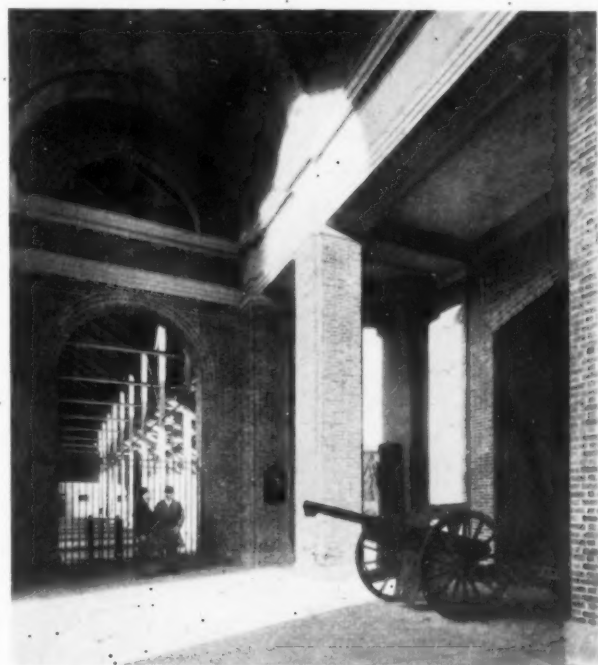
Larson & Wells, Architects

The relative importance of the different games which are played during the season limits the choice of sports for which the stadium is primarily intended. The season of the year and the hours of the day bring considerations of sun, heat and shadow, as well as of rain and snow. Prevailing winds become very active factors on open land, not only as retarding agents during the game, but as force constantly bearing against the exterior walls of the building.

The stadium is useful in proportion to the speed with which the crowd can enter it and leave it with comfort and safety. Where (and where is this not true today?) a large part of the crowd comes in for the game and departs soon after the game by train or in automobiles, the planning of the building and its usefulness must depend in part on the terminal facilities of the location, its distance from the places from which crowds come, transportation from the railroads and parking areas for automobiles, as well as wide paved walks leading to the building. Furthermore, the distribution of the crowd outside of the stadium, so that persons going to different tiers and sections of seats will enter by different openings or doors and so that these lines of spectators cannot cross each other in a time of panic, is a prime essential. The safety of the people also brings up the relative merits of steps or ramps, the latter affording by far the safer means of entrance and exit to and from the higher seats. This is especially important where more than one deck is used for the seating.

In planning for the safety of the people after they have entered the structure, the dead load or weight

of the material is the first consideration. The all-concrete, the concrete and earth, the earth and wood, the earth, wood and steel, and the concrete, steel and wood structures will all have a different dead weight, and none of these will be the same as the dead weight of the steel, concrete and brick structure. Added to this weight there will be the weight of the



Detail, Memorial Field Stadium, Dartmouth College, Hanover, N. H.

Larson & Wells, Architects



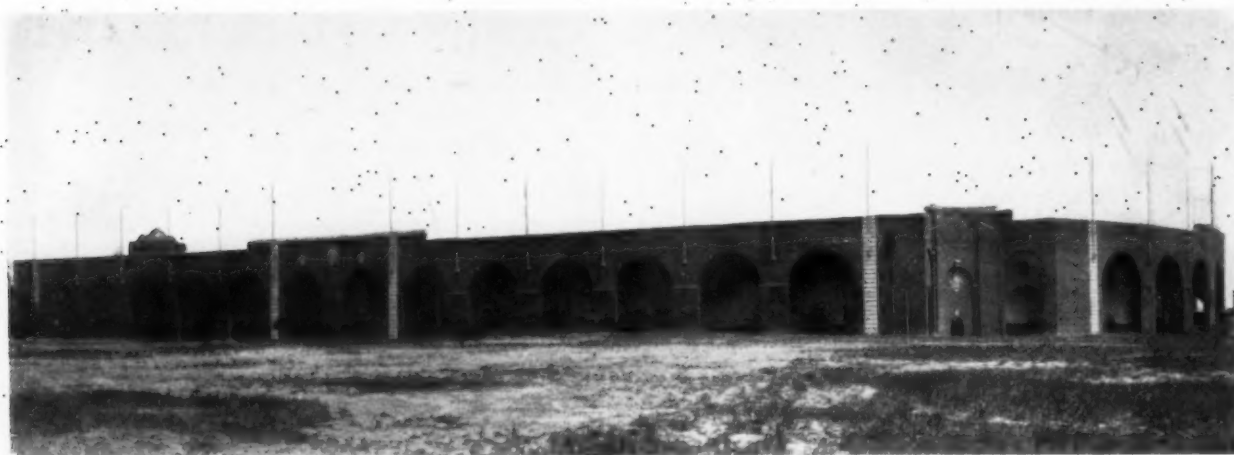
Stadium, University of Colorado, Boulder, Colo.
Day & Klauder, Architects

spectators themselves. This weight will be greatly increased by the movements of the spectators. The seating capacity and weight allowance of the Illinois stadium, for example, allow one person to each 3.2 square feet, the seats being raised wooden seats set on blocks, bolted to the concrete steps, thus giving foot room under each seat for the person in the next seat behind; by figuring the average weight of the spectators as 150 pounds, the weight per square foot resulting was figured as 47 pounds or thereabouts over the area covered by the seats. By figuring in the areas of the aisles, press boxes, etc., this would be decreased to 42 pounds per square foot. By somewhat more than doubling the strength for the support of this weight, the increase of the weight of the crowd when moving was cared for. As people crowd together on leaving, the movement is less, and so the decrease in the live weight due to movement offsets the increase in the weight per square foot due to the crowding of the people together.

Certain movements of the crowds at football games produce horizontal thrusts which must be provided for by bracing. The Illinois stadium was braced to provide for a horizontal load of 20 pounds per square foot of vertical surface in the upper deck. The pre-

vailing winds are such that this bracing also takes care of the weight due to the force of the wind, but as an extra precaution a considerable amount of further bracing was introduced into the structure to care for the wind pressures. The total dead and live weight were added together, and the structure built to sustain twice this load.

Considerations of economy with safety have caused certain stadiums to be built on the embankment plan,—structures without architectural merit. Having replaced the supporting arch with tamped earth, their construction is an engineering rather than an architectural problem. Furthermore, on account of the material used, it is necessary for them to assume the circular or elliptical form, and thereby they lose in convenience what they gain in economy. The exterior of what seems to be the future modern stadium—a series of gymnasiums or field houses with seated roofs arranged around a playing field, adapted to the contests staged there—may be designed to accord with any prevailing campus style of architecture, and the material used may be of any local sort that has been adopted for economy's sake by the university. There is no fixed standard of design or material, nor can there be, once tradition is forgotten.



Franklin Field Stadium, University of Pennsylvania, Philadelphia
Day & Klauder, Architects

Interesting Possibilities of "Efficiency Plan" Dormitories

By C. STANLEY TAYLOR

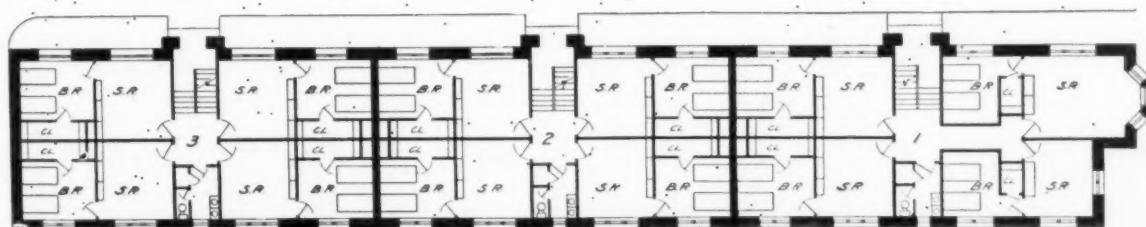
IN various preceding articles and illustrations the problems and methods of planning modern college dormitories have been presented in considerable detail. It is felt, however, that this discussion would not be complete without giving some consideration to the application of the "efficiency planning" idea in the layout of dormitory buildings.

Efficiency planning has already been strongly established in the apartment building field, particularly in the west and Pacific coast districts, and today it is being adopted more and more in the large eastern cities of the United States. This type of planning consists primarily of establishing a double-utility purpose for rooms, which will allow a maximum of service with the smallest possible space requirement. The essentials of efficiency planning are to be found in the equipment, particularly in the use of door beds, making it possible to use a room as a living room in the daytime and a bedroom at night. In the planning of college dormitories this efficiency idea is already beginning to show its influence and to prove the desirability of providing two-room efficiency in one-room space for this type of occupancy, and the advantage is sufficiently obvious, so that the various factors need not be described in detail.

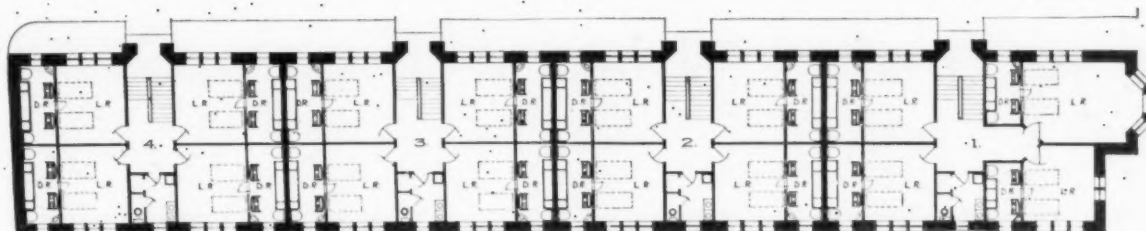
In order to facilitate an analysis of this method of planning as compared to the usual method, there are shown here two plans having exactly the same perimeters. The first plan shows a typical dormitory layout which has been selected from a recently con-

structed building in the middle west. This layout provides 12 two-room apartments, each consisting of a bedroom and sitting room, with a bathroom serving each four apartments. The second plan shows the identical perimeter worked out under the system of efficiency planning by providing 16 apartments, having the efficiency of two rooms each, but allowing for the housing of four or eight more students on the same floor and still retaining the same ratio of bathrooms to room occupancy. In the efficiency plan shown here the sitting room serves as a bedroom at night in the manner illustrated on the next page, while ample dressing rooms with chiffoniers for each occupant are provided. On the next page is illustrated the new dormitory building of the Chicago Theological Seminary, of which H. H. Riddle was the architect. Here the efficiency idea is carried throughout the plan, but dressing rooms are not provided, the beds being concealed in large closets during the daytime. The illustrations of a typical room indicate that this method of planning provides an attractive living room during the daytime and a comfortable bedroom for two persons at night, thus making possible the doing of double duty by the room.

It is quite probable that use of this type of planning will increase considerably during the next few years, since it represents not only conservation in the amount of building space provided but lowers the cost of housing for students from the points of view of both the college administration and the students.



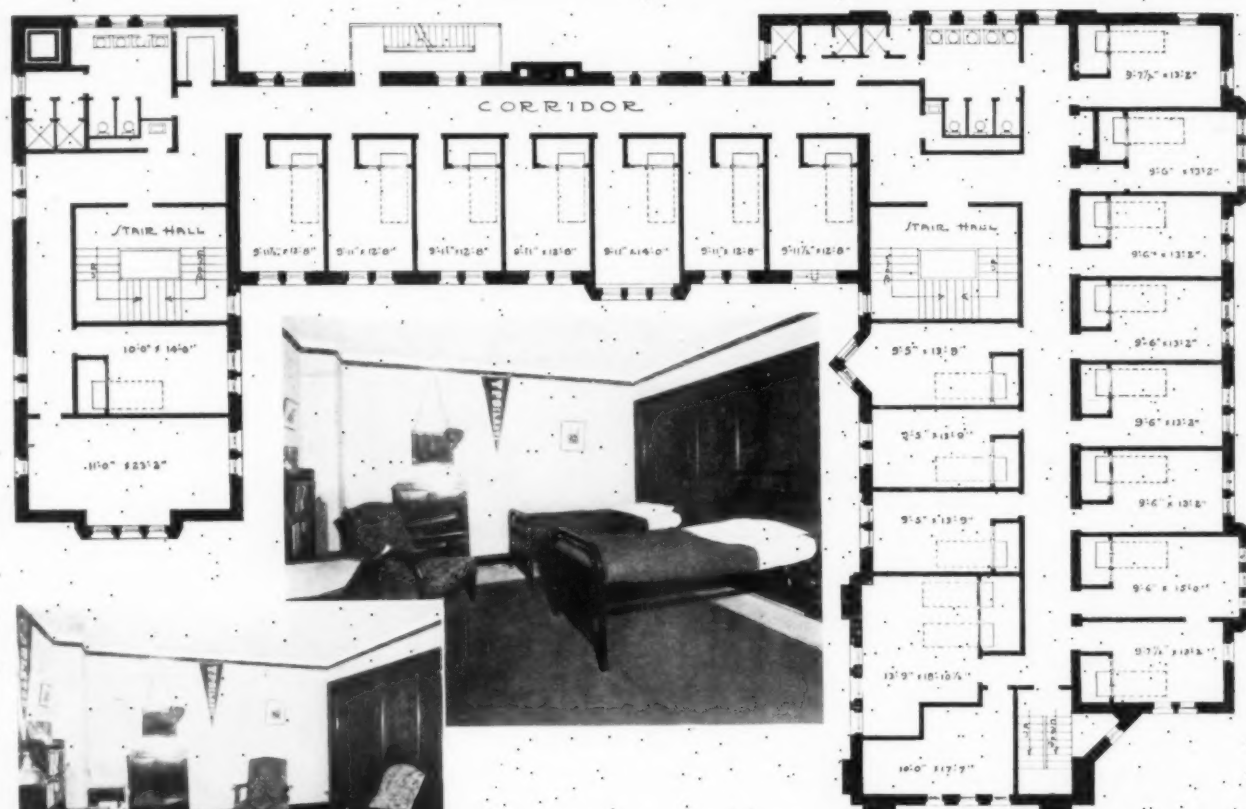
Typical Dormitory Layout Providing 12 Two-Room Apartments



Same Perimeter Laid Out to Provide 16 Apartments of Two-Room Efficiency

"Efficiency" Dormitory of the Chicago Theological Seminary

H. H. RIDDLE, Architect



An interesting feature of this plan is the use of door-beds, providing for each room a double utility of purpose as shown in the two illustrations included here



The Quality of Exterior Design Is Not Impaired by This New Planning Method

BOOK DEPARTMENT

"Vingt Lithographies du Vieux Paris"

Reviewed by HOWARD MOÏSE

It was only a few years ago that Mr. Samuel Chamberlain's drawings first began to be known in the architectural world. They achieved at once a popular success, which has made him a frequent contributor to the architectural press, and they have always been among the pleasant features of any magazine in which they have appeared. In the earlier drawings the appeal lay principally in a certain directness and simplicity of handling which was an inspiration to the younger draftsmen. But their popularity was by no means limited to the student group; marked by an admirable economy of method, by a crispness and sureness of line, and by excellent delineation of architectural motifs, they were unmistakably the sketches of an architect of trained appreciation.

Unfortunately, however, many of these early drawings were marred and cheapened by undignified tricks of draftsmanship, and especially in the handling of the skies, and not infrequently one felt that Mr. Chamberlain, having found a happy formula, was in danger of letting the formula run away with him. The draftsmanship often eclipsed the subject, and in spite of the excellent drawing of architectural form one felt no reality behind the black ink and the white paper. A successful formula is a dangerous thing, and I, for one, had little hope that Mr. Chamberlain would be able to rise above it. It is a pleasure, therefore, to record that he has risen above it, and that in the portfolio of lithographs which have recently been imprinted in Paris he has produced work of a very high order. Mr. Chamberlain long since abandoned most of the bag of tricks which detracted from his early drawings, and in the last two years his work has displayed a steady and consistent growth in power and dignity. The drawings in this portfolio, however, mark a forward step far in advance of anything he has achieved hitherto. They are drawings of great beauty and distinction, drawings which one not only enjoys looking at, but which one would like to really possess.

I will not claim for them perfection nor discourage Mr. Chamberlain from further endeavor by referring to them as the culminating achievement of his career. I am sure, in fact, that he is destined to go even farther in the graphic arts than he has gone in these last

drawings. In a few of them one still sees the faint shadows of early failings. One feels, for instance, while greatly admiring the crispness of line and the sparkling beauty of contrasting black and white, that some of the plates show a lack of half-tones and aerial perspective, the distances and middle distances failing

to take their proper places in the picture. And, beautiful as the drawings are, one still feels in some of them, as in the artist's earlier work, a certain lack of the spiritual. Exquisite in craftsmanship; they touch the intellect rather than the heart. The subjects are drawn with a punch but seldom with a caress, and though the outer semblance is beautifully portrayed, the inner spirit—the mood of the place—seems somehow to be lacking or else feebly expressed.

What is this spiritual quality in a drawing that recreates in the observer the living spirit of a place and time and stirs his heart with poignant memories? Is the ability to achieve it something an artist can acquire, or must it simply happen, unaided and unsought? These are ques-

tions I hardly feel qualified to answer, but I suspect that it comes unaided and unsought,—that it must have been felt by the artist rather than striven for. The spiritual content of a drawing therefore is in direct proportion to the spirituality of the artist. To reproduce the "atmosphere"—the mood—of a place, he must have felt keenly that mood. He must have loved and suffered and bought drinks in the shadow of the buildings he sketches if he would have his drawings instinct with the life of them. Possibly Mr. Chamberlain has not sufficiently suffered in Paris. He has perhaps lived in too comfortable a hotel, and our hope for his future is that he may constantly feel more deeply the Paris which he presents with such brilliance in these studies.

These critical observations are merely made in passing. The shortcomings I have mentioned are insignificant in comparison with the great charm of the majority of the plates. The collection as a whole is a delightful thing. It is, I believe, Mr. Chamberlain's first attempt at lithography, yet he is quite at home in it.

VINGT LITHOGRAPHIES DU VIEUX PARIS PAR SAMUEL CHAMBERLAIN. Printed by hand in Paris on handmade Arches paper. Lithographs 13 x 20 inches in linen faced portfolio. Price \$75. William Helburn, Inc., New York.

Books Reviewed

Vingt Lithographies du Vieux Paris. House & Garden's Second Book of Houses.

A Monograph of the William K. Vanderbilt House.

Masterpieces of Spanish Architecture.

Architectural Construction: Vol. I. English Furniture at a Glance.

Small Family Houses.

Good and Bad Manners in Architecture.

Books Received

Meeting House of the First Baptist Church, Providence. By N. M. Isham.

Woodcut Annual for 1925. By Alfred Fowler, Kansas City.

A Manual of Style. \$3. University of Chicago Press.

HOUSE & GARDEN'S "Second Book of Houses"

THE 1925 work—190 pages—on the moderate cost house without and within; site; setting; style; design; material; garage; plan; interior decoration; furnishing; equipment; the entire place, in fact, covered in well selected material, arranged, edited and lavishly illustrated with *House & Garden's* well-known taste. Drawings of details of structures and accessories. The work is invaluable to the discriminating home owner or home furnisher. It covers the entire subject. Price \$4.



*A Country House designed by Frank J. Forster
Illustration from "The Second Book of Houses"*

"The First Book of Houses"

CONTAINS 110 pages of illustrations and plans of some of the best moderate-cost homes in the country, of different styles and materials and of great variety of plan. Successful alterations are shown, and there are numerous illustrations of details such as porches, fireplaces and mantels, doorways, windows, stairways and chimneys. An excellent work on the subject. Price \$3.

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

SPANISH FARM HOUSES AND MINOR PUBLIC BUILDINGS.
Photographs and Drawings by Winsor Soule. 98 pp., entirely illustrations. 8x11 ins. Price \$10 net. Architectural Book Publishing Company, New York.

IN his introduction to this useful work on Spanish architecture, Ralph Adams Cram points out that Spain—the real Spain—is an almost unknown country. "It is true that hurried tourists dart into Seville on their little trips between steamers, and touch perhaps at Granada and Cordova on their way back to Gibraltar. Madrid also is not unknown, though why, except for the Prado, remains a mystery. Now and then strayed revelers from San Sebastián venture across the Pyrenees, even to Bilbao, and at the other end of the mountain wall commercial agents come down to Barcelona—and return. The great Spain of the old kingdoms of Castile and Leon, of Aragon and Andalusia, the real Spain that hides itself away from the cities and avoids the railways and the motor roads, this is left to itself, and it is well that it is so.

"Madrid, Barcelona, Bilbao are not Spain; they are only varying degrees of cosmopolitanism and the dead leveling of industrialism. Seville is indeed real, and Toledo, Segovia, Burgos, Salamanca, while there is a heart of Barcelona that has not wholly surrendered to coal and iron and their derivatives, capitalism and communism; but it is on the wide, windy plains of the great plateau, in the amber and violet mountains of its borders and spurs, and in the rich lowlands of the Mediterranean shore that the real Spain of San Fernando and the Catholic Kings and Don Quixote still exists, and happily may be found by the venturesome and the un-circular-trip-perized.

"Of course it is unfamiliarity that has bred the modern contempt for Spain, the strange illusion of its degeneracy and backwardness. It is both these things, if you measure it by the standards of the industrial magnate and the commercial traveler and the efficiency expert; but a people must first be judged by their own established standards, and those of the Spanish people, as a race, are otherwise. It is arguable that they have chosen a better way than others of their generation; in any case, to estimate them and their civilization and their ideals it is necessary to get outside all preconceived ideas not only as to our own civilization, but as to theirs as well, for never has a people been more misrepresented by historians and travelers and essayists. Practically all one hears of Spain is wrong, both as to the things that are praised and those that are blamed. It is the only country left on earth that, to the perceptive traveler, is new.

"Now the old Spain of evangelical religious faith; of aristocratic democracy, of austerity and courtesy and grave self-respect, the Spain of arid little farms, parched vineyards and gaunt mountain pastures; of tropical gardens and cloistered patios, of vast, ruined castles and white farmhouses and friendly, immaculate inns; of shepherds and donkeys and *caballeros* and beggars, is the Spain that Mr. Soule has found, and his pictures are glimpses of this interior Spain. You will not find these subjects in the photograph shops or in the pages of the geographical magazines, but you will find them in Spain if you once leave the tourist track. Not that Mr. Soule has disdained the major architecture of the larger towns; he gives his examples of the

Baroque (spontaneous for once) and the fantastic Plateresque that are so characteristically Spanish, but chiefly he pursues the vernacular architecture of farms and inns and the narrow streets of little villages, that is not really architecture at all from an academic point of view, but just the straightforward, instinctive building of grave and kindly men behind whom lies the creative tradition of two thousand years.

"Spanish architecture is incomparable. Moorish, Romanesque, Gothic, Plateresque, Rococo, and whatever be its source or genre, are transformed by Spanish temperament into something quite racial and unique; but side by side grows a quite different thing, and that is the modest building of the poor farmer and the undistinguished denizen of the town. Here is the art of building reduced to its simplest and plainest forms.

"Consider the simplicity of the materials and the forms. Rough rubble, either left gray and silvery or washed a thousand times with white, yellow, sienna or rose-red lime; brown, natural wood, and rough tiles of every possible shade, from raw umber and dull ochre, through burnt sienna to murrey and the dull purple of winlees. There is little brick and less cut stone, while ornament is most sparingly used; a roughly carved capital here and there, a door architrave, a coat of arms; there is little more, and the effect comes from instinctively good proportions, a perfect designing and placing of doors and windows, and a picturesqueness of composition that is so good it could not be premeditated. The Spaniard understands the wall and the roof as does no one else; he can build up his flat wall of rubble, cover it with a toned whitewash, pierce it with a door and five windows, add a balcony and two *rejas* of perfect ironwork, crown the whole with a sweeping roof of tawny tiles, plant two cypresses and an almond tree near by, and produce a composition that is the despair of the trained and cultured architect.

"No matter where you go you find this sort of thing at every turn, whether in the dim *calles* of Seville, the gray alleys of Toledo, the ochre and umber streets of Segovia, or in the tropical towns of Andalusia or the bleak barrens of Aragon and Castile. Nor does it matter what century gave it birth; it is all good and of a piece, down through the seventeenth and eighteenth centuries, even into the nineteenth. It is only the last 30 years that have seen the death of the old tradition and the coming in of the morbid affectations of architects and speculators, and the blasting horror of the 'Barcelona style,' with its culmination in the abortive Church of the Sagrada Familia."

ITALIC HUT URNS AND HUT URN CEMETERIES: A Study in the Early Iron Age of Latium and Etruria. By Walter R. Bryan. Price \$2.50. The American Academy in Rome, 101 Park Avenue, New York.

THE appearance of Volume IV of the Papers and Monographs of the American Academy adds one more to the studies of antiquity which the Academy is sponsoring. Few details of what is still left of the ancient world throw more light upon its civilization and its relation to the people of the period than do its burial customs, and study of these customs as they prevailed in Italy has a high value for students of ethnology and for anyone who values the culture of the antique world.

With the critical scholarship and careful research with which all these studies are prepared, Mr. Bryan deals with the hut urns and the cemeteries, chiefly in southern Etruria and northern Latium, where these incinerary urns are found,—urns in the forms of huts or houses and made of *impasto Italico* or argillaceous earth baked at an open fire, the urns varying from 7 to 22 inches in diameter and being as a rule about 10 inches in height. They marked, apparently, the beginning of a long tradition, and their use was followed by that of more elaborate urns of terra cotta, adorned with painted figures, or by urns of bronze, silver, *bucchero* or stone. The illustrations, of which there are many, add to the interest of this archaeological study.

MASTERS OF ARCHITECTURE: John Francis Bentley. By W. W. Scott-Moncrieff. Text with 34 illustrations, 7½ x 10 ins., from photographs by F. R. Yerbury. Price \$2.50. Charles Scribner's Sons, New York.

IN issuing the monographs which comprise this series the editors wisely intersperse among those dealing with architects who lived centuries ago occasional volumes upon architects or architectural firms of the present or of comparatively recent times. Thus among the great of former centuries, such as Inigo Jones, Hawksmoor, Chambers, Vanbrugh and Fischer Von Erlach, the series already includes volumes on McKim, Mead & White and Bentley.

John Francis Bentley will live in history chiefly as the architect of Westminster Cathedral, built upon a site purchased by Cardinal Manning, and the first great cathedral built by English Catholics since the Reformation; a building structurally complete, but as yet lacking in most of the mosaics and other accessories which one day will render it something other than the austere though beautiful place of today. Built after a careful study of certain old churches in Venice and those at Ravenna, Bentley developed his plan for a great church exteriorly of brick and stone with a vast and lofty interior, the nave capped by three low saucer domes, with a fourth above the choir and high altar, the singers' choir being behind the altar.

The volume owes much of its attractiveness to the illustrations,—many of the cathedral and quite a number of other churches by Bentley, notably that beautiful building, the Church of the Holy Rood at Watford.

GREEK LIFE AND THOUGHT: A Portrayal of Greek Civilization. By La. Rue Van Hook. 329 pages, 5¼ x 8½ ins. Price \$2.50. Columbia University Press, New York.

GROWING interest in the history and culture of Greece is causing not only the study of Greek but also the publication of a number of works which deal with different aspects of classical antiquity. The mutilated remains of Greek art and Greek architecture which have come down to us are but reminders of the many glories of ancient Greece,—her literature, philosophy, drama, and everything else which contributes to civilization and culture.

This excellent work by the Professor of Greek and Latin in Barnard College, while it surveys the results of effort in every form, seems to dwell with particular emphasis upon whatever concerns architecture and the arts most closely allied to it. It contains a critical study of the Greek theater and drama, and a valuable bibliography.

LOUIS XVI FURNITURE. By Seymour de Ricci. 272 pp., 9 x 11½ ins. Price \$10. Brentano's, 1 West 47th Street, New York.

FRENCH styles of interior decoration and furniture owe their unpopularity, or rather their want of popularity, in America largely to the mistakes of their friends. Many have been the instances where Americans, long resident in Europe perhaps, have desired to reproduce at home something of the air of beauty and refined richness which hangs like faint aroma around about many of the older houses in France, but the result has generally been disappointing, and at times it has been disastrous. Choice has only too often been made of the florid and extravagantly sumptuous of the French types, sometimes attempted by architects or decorators insufficiently equipped, and in the successful use of such styles much depends upon securing the proper setting or environment;—so for one reason or another the use of French styles in America has been disappointing, and the popularity of the type is not advanced when there are pointed out as examples of French interiors over-ornate and superlatively gorgeous apartments (usually in hotels) such as ballrooms or restaurants, which most people feel inclined to accept as representative. Only lately has there come a movement which seems destined to popularize French styles by emphasizing the beauty of the Directoire and the simpler forms of the Empire, both of which are likely to become popular.

In this volume there is presented the case for the style which goes by the name of Louis XVI. Coming as it did as a reaction from the extreme architectural and decorative forms associated with the names of the pre-

ceding monarchs, the type abounds in opportunities for securing effects which are comparatively simple and quiet without ceasing to be rich and a trifle ceremonious.—*comparatively* simple, to be sure, for the French interior differs in its very essence or nature from most of what is popular in America, and its use will scarcely be attempted by anyone not prepared to live up to the demands which it will inevitably make. In these pages are contained illustrations and descriptions of many interiors of the more simple order, their walls covered with the paneling which the French know so well how to use, the panels filled in with fabrics of different sorts or else with plain surfaces, all this supplying a richly colored background to set forth furniture which more perhaps than furniture of any other type depends for effect upon its setting. The volume, well written and lavishly illustrating well chosen examples of interior architecture and the furniture which goes with it, would furnish a valuable addition to the library of any architect.

EVERYMAN'S HOUSE. By Caroline Bartlett Crane. 226 pages, 5 x 7½ ins. Price \$2 net. Doubleday, Page & Co., New York.

SO much excellent matter is being published upon the subjects of building, furnishing, decoration and other more or less closely related topics that it is difficult to understand just why this work was either written or printed. Even a careful examination shows but little which by any stretch of the imagination could be regarded as either constructive or helpful, and the illustrations without exception show what it would be well to avoid having. Little has been made of an opportunity.

PROVINCIAL HOUSES IN SPAIN

By Arthur Byne & Mildred Stapley

ARCHITECTS value Spanish types of domestic architecture because of their simplicity of design and plan and also because they are easily developed in materials inexpensive and easily had. Spain offers a choice of several kinds of residence architecture, types sufficiently different from one another to afford considerable range of selection, yet all possessing the same strength and virility, the excellent lines, the same graceful but unaffected grouping, and the discriminating use of detail which renders distinguished so many Spanish domestic buildings.

Houses in various parts of the Spanish peninsula, particularly the buildings of medium size in rural districts or provincial towns, offer excellent precedent for use in different parts of America where climate conditions are about what prevail in the provinces of Spain.



IN this volume two well known writers on Spanish architecture and decoration review the various forms which are given to the small or medium sized house in Spain. To render the work as helpful as possible to architects, the authors have included many plans and drawings of different kinds, details of such exterior parts of buildings as friezes, cornices, windows, timber overhangs, soffits and balconies, or of such interior parts of the structure as ceilings, fireplaces, doors and stairways. Part of the work deals with the tiles, pottery, ironwork, plaster in relief and the other forms of craftsmanship which contribute so much to the excellence of domestic architecture in Spain. It is a work likely to be invaluable to the designer.

The book contains text and 190 plates 12½ x 16 inches, and is bound in cloth. Price \$25, postpaid.

ROGERS & MANSON COMPANY, 383 Madison Avenue, New York

BOOK DEPARTMENT

The Art of Planning Cities and Towns

AS never before in modern times, the planning of cities, towns and villages engages the attention of practitioners and arouses and attracts popular interest. The existence of the art, if art it may be called, comes as something fresh and new, until one discovers that along with most of what makes modern life livable it was inherited from the ancient world, and exists today in a position which compares hardly favorably with that which it occupied in the days of the ancients in any one of many lands.

In this stimulating and helpful volume a close student of town planning presents its history and development in the form of a review or survey. The laying out of towns so that they were beautiful as well as practical was done ages ago in Egypt and indeed in every country of antiquity. Athens, as it grew, could no longer be contained upon the summit of its lofty rock, and expanded upon the surrounding plain, the rock itself becoming what today we might like to call a "civic center," dedicated to Athena and occupied by the buildings, faultlessly designed and skillfully disposed, which are still the admiration of the world. The art of planning cities was passed (along with other agencies of civilization) from Greece to Rome, and was spread by the Romans over all the considerable part of the earth which owned the sway of the Imperial Eagles,—the planning and the imaginative features still Greek, but the practical and regulative part, the organization

in other words, Roman. Many old cities in western Europe, notably a number in England, still exist upon the plans which were given them by the Romans when they founded them as outposts of Roman rule upon the then edge of the world. The importance in which planning was held by the Romans may be studied in Vitruvius.

Town planning as it exists today, in America at least, might be said to possess an interest which (alas!) is largely academic. Unfortunately in this modern world cities cannot be established by imperial fiat and developed by governmental decree; villages have an unaccountable and perverse way of springing up and growing first into

towns and then into cities, and by the time that it reaches the point where it appreciates having a plan and feels the need of it, the city has been so largely developed and its lines are so firmly fixed that little change is possible in the districts where the need of a plan is greatest. There is probably no part of any city in America which stands more sorely in need of a plan than downtown

Boston, and yet to bring any sort of order out of its chaos of a maze of narrow and crooked streets (which it is said were developed from cow paths) would present problems which, though they might be successfully solved on paper and the solution plausibly presented in perspective drawings, would be likely to bankrupt any city administration courageous enough to attempt it. There is encouragement, nevertheless, in the mere fact that the need of city planning and the desire for it are so prevalent today. Any constructive work is necessarily preceded by a desire for betterment, and herein lies much to encourage the planners of cities and towns. Marvelous things can be done in the development of suburban villages, and even if the most closely built up sections of large cities do seem to offer scant ground for hope, there are often park areas or neglected districts which offer opportunities for development,—one such is the extensive beautifying of Boston's frontage on the Charles River, while in Chicago, besides several instances where forlorn districts have been redeemed, there is the

filling in of a large part of the lakefront and the making of the area into what bids fair to become a civic center.

Mr. Lanchester deals with his subject with a thoroughness which leaves nothing to be desired. Not only the historical aspect receives attention, but also the relation of the subject of town planning to the world today,—and the need for it has never been so great! Cities in various parts of the world are analyzed, and maps and illustrations are given to encourage more study of them.

THE ART OF TOWN PLANNING. By Henry Vaughan Lanchester. 244 pp., 5 1/4 x 9 inches. Price \$7.50. Charles Scribner's Sons, 597 Fifth Avenue, New York.

Books Reviewed

The Art of Town Planning. By H. V. Lanchester.

London Alleys, Byways and Court-yards. By Alan Stapleton.

Problems in Architectural Drawing. By Franklin G. Elwood.

The Churches of Rome. By Roger Thynne.

Concrete Products. By Wallace R. Harris.

The Building Labor Calculator. By Gordon M. Tamblin.

English Decoration and Furniture of The Early Renaissance. By M. Jourdain.

The Appraisers' and Adjusters' Handbook. By William Arthur.

English Architecture at a Glance. By Frederick Chatterton.

The Forestry Almanac.

Books Received

Iowa Geological Survey: Vol. XXX

The Story of Architecture, \$2. By P. Leslie Waterhouse (D. Appleton & Co.).

The Touchstone of Architecture, \$3. By Sir Reginald Blomfield (Oxford University Press).

GRADE SCHOOL BUILDINGS; BOOK II

IN no department of architecture have the last ten years seen quite the progress which has been made with schoolhouses, a class of buildings of the first importance, since they exert a strong influence upon their communities, and by their architectural excellence or the lack of excellence they elevate or lower the architectural standards of entire districts. Study of school structures, particularly at the hands of a group of well known architects, has resulted in their being given a high degree of architectural distinction and dignity in the way of design, while study directed toward their planning and equipment has led to their being practical and convenient far beyond what was regarded as an advanced standard of efficiency even a few years ago.



Kensington Schoolhouse, Great Neck, N. Y.
Wesley Sherwood Bessell, Architect

THIS volume, a companion to another published in 1914, records the results of endless study and experiment in different parts of the country; summed up and presented. By illustrations of exteriors and interiors, by floor plans and carefully written descriptions, and articles by well known architects and educators the present high standard of schoolhouse design is made plain, and these results which have been achieved by a few architects and school boards are thus made possible to all architects who are interested in schoolhouse design. The compiler has selected from almost 1000 exteriors and floor plans the school buildings to be illustrated, and the volume records "a process of innovation and elimination, namely, the introduction from time to time of features which have been deemed desirable and practical, and the elimination of things which, owing to changed school methods, are no longer required."

400 pages; 7½ x 10½ inches

Profusely Illustrated; Price \$10

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

LONDON ALLEYS, BYWAYS AND COURTYARDS. Drawn and Described by Alan Stapleton. 183 pp., 6½ x 8½ ins. Price \$5. Dodd, Mead & Co., New York.

WITH the toll which each year takes from what remains of Old London, there is reduced the number of old buildings which have been accumulated during centuries,—structures in which are exemplified all the architectural styles which have followed one after another since the days of the Tudors. London owes much of its charm and fascination to its plan, or rather its lack of a plan. Much of it was built before the days of town planning and before the invention of the deadly "gridiron" which makes hideous so many American cities, and as London's streets, squares, places and lanes developed apparently by no fixed plan, the buildings which face them were built with apparent defiance of all rules of architecture, and yet they possess charm and distinction which it would be difficult to secure today, when the world's building customs are changed, and design itself is in a state of flux.

Sketches of many old London byways, alleys and courtyards adorn this volume, which has a high value to architects. Not a few of its illustrations afford suggestions which might easily be developed and made the basis of modern design, and the text in which Mr. Stapleton deals with Old London has much of the literary value of writings of the Georgian period.

PROBLEMS IN ARCHITECTURAL DRAWING. By Franklin G. Elwood. 132 pp., 7½ x 10½. Price \$2.25. The Manual Arts Press, Peoria, Ill.

THE difficulty with which many students grasp the details and intricacies of architectural drawing makes welcome such works as aid his understanding. Mr. Elwood's purpose in preparing this volume has been to provide working text calculated to aid the beginner in drawing as well as to assist junior draftsmen in architects' offices, and to help workmen, foremen, and contractors in the building trades who find it desirable to prepare their own drawings or to check those of others.

The volume is divided into two parts. One of these parts consists of text with illustrations and explanations of the best methods employed in drafting and construction, containing also information on typical forms of wood and masonry construction and giving considerable data of practical value. The latter section is made up of several groups of "problems" of widely different kinds, all practical, buildable projects which illustrate well current standard forms of construction in general use.

THE CHURCHES OF ROME. By Roger Thynne. 460 pp., 4½ x 6½ ins. Illustrated. Price \$5. Kegan Paul, Trench, Trubner & Co., London; E. P. Dutton & Co., New York.

AMONG the vast number of churches in Rome there are many which would be considered of the first importance if situated elsewhere than in the Mistress of Cities, which sits enthroned upon its seven hills. To visit even the more famous of the shrines of architectural importance and historical associations would in itself be a task, and possibly to aid the traveler in selecting what are to him the more important of these churches this work, without being in any sense a guide book, has been compiled and issued. It discusses in the most helpful way possible quite a number of the Roman churches, their history and architecture, and the treasures of art of different kinds and of various periods which they contain.

CONCRETE PRODUCTS: Their Manufacture and Use. Compiled, Written and Edited by Wallace R. Harris. Second Edition. 586 pp., 4 x 6½ ins. International Trade Press, Inc., Chicago. For Distribution to Architects on Request.

CONCRETE, a material which proved to be so useful in the hands of the eminently practical Romans; plays each year a more and more important part in present-day building. Knowledge regarding this material is one of the most useful of the gifts left by the antique to the modern world, but building today differs in many respects from that done centuries ago, and with these changes there have come problems which have had to be solved in order that concrete be used to advantage. All this has long engaged the attention of engineers, architects and builders, and concrete, its reinforcing and best use are now so well understood that this adaptable material is being employed in countless ways.

This excellent treatise, as its title suggests, covers the subject in all its many ramifications. Written by the managing editor of *Concrete Products*, who is also a member of numerous societies of engineers, it discusses the use of concrete for actual construction, as well as for making building block, brick, roofing tile, drain tile, sills, lintels, piping, etc. The author's close association with many sources of data and statistics has doubtless aided him in the production of this excellent manual.

THE BUILDING LABOR CALCULATOR. "An Accurate, Rapid and Reliable Cost System for the use of Architects, Contractors, Engineers and Appraisers." By Gordon M. Tamblin. 4 x 7. Duraflex Binding; Morocco Covers. Price \$10. Gordon M. Tamblin, Sweeney Building, Denver.

IN the relations between the offices of architects who draw plans and specifications and the offices of contractors who carry out actual construction, there are opportunities for frequent misunderstandings. One of the details likely to cause trouble is the lack of close accord between specification writer and contractor, each of whom has his own methods of working. The number of specification writers is large and the number of contractors perhaps even larger, and it is obvious that unless the specification writer fully understands the methods of the particular contractor who is to win the contract and perform the work, and unless the contractor understands the method of figuring by which the specification writer has made his calculations, there is abundant opportunity for mistakes.

Where a contractor is computing the cost of work there are of course two main items to be considered: (1) quantities of materials of various grades and prices, and (2) amounts of labor of different classes, trained and untrained, also varying in grades and prices. Material may be said to be a fixed quantity, measured from the plans, and its quality is fixed by the specifications. Labor is a variable quantity, due to numerous reasons well known to contractors; its unit is the hour.

In this useful work the different departments of building are so divided and each department's work so tabulated according to quantity of materials used, method of construction adopted, and class of labor likely to be employed, that quantities of material or amounts of labor necessary are quickly ascertained, and when multiplied by current prices the cost items are quickly found. The Building Labor Calculator is not intended to be a substitute for the use of good judgment

and ordinary precaution in estimating. The author claims, however, that it will safely guide the contractor when making his estimates, and that it is a positive safeguard against erroneously high or low bidding. It practically eliminates the possibility of loss, providing the contractor's construction gang is properly organized.

ENGLISH DECORATION AND FURNITURE OF THE EARLY RENAISSANCE, 1500-1650. By M. Jourdain, 305 pp., 10 x 14 ins. Lavishly illustrated. Price \$25. Charles Scribner's Sons, New York.

THE glory of English architecture lies scarcely more in the splendor of its actual building than in the beauty and richness of the accessories which contribute to this splendor. The Renaissance entered England late and penetrated slowly, the reign of the first of the Tudors, Henry VII (1485), finding England not far advanced, as far as architecture was concerned, from what it had been a century before. But the following reign found the Renaissance not only actually in England, but actively at work. Royalty prided itself upon its patronage of all the arts, particularly of architecture, and royalty's emissaries searched all of Europe for the most skilled craftsmen to build and enrich the structures with which royalty presently began to adorn England. Nor were the English nobility slow in following royal example and building upon a scale almost regal. This involved, of course, a brilliant flowering of painting, carving of wood, metal working, staining of glass, and all the arts upon which architecture so largely depends, and this reign and that of Elizabeth saw the triumphs of skill and craftsmanship; which in earlier days had been devoted so lavishly to the service of the Church; now given chiefly to domestic and secular uses.

Such is the subject covered in this, the most recent of a series of excellent volumes on the architecture, decoration and furniture of England during the Renaissance period, and this volume, as its title implies, deals only with the early Renaissance and therefore excludes both the earlier Gothic work and that of Inigo Jones on which English Palladian decoration was based during the early eighteenth century, but its ground is adequately covered.

For centuries the craftsmen of England have excelled in all the arts which play so important a part in building and decoration,—in the plaster or "parge" work, which is so effective and decorative when used in connection with half-timber construction for the exteriors of buildings or when employed in the form of ceilings or friezes for rooms paneled with oak; in glass painting or staining; in metal work of pewter or wrought iron; of embroidery—*opus Anglicanum*—which was sought for in every corner of Europe, and so on through all the list of crafts or liberal arts. These arts were never more vigorous than in the period covered in this work by Miss Jourdain, and her excellent and authoritative text is supplemented by countless illustrations which have been gathered from private and public collections and from buildings in which masterpieces still exist *in situ*.

This volume ranks as Volume I of the "Library of Decorative Art." Volume II is entitled "Decoration in England from 1660 to 1770"; Volume III, "Furniture in England from 1660 to 1760"; while Volume IV, deals with "English Decoration and Furniture of the Later XVIIIth, and the early XIXth Centuries."

THE APPRAISERS' AND ADJUSTERS' HANDBOOK. By William Arthur. 616 pp., 4½ x 7 ins.; Flexibly bound in leather. Price \$5. U.P.C. Book Company, Inc., New York.

THE estimating of values as applied to buildings covers, as may be readily seen, considerable ground. It includes, for example, the calculating of costs of erecting new structures, which of course is what is done by contractors in the preparation of bids and, as a wholly different department of the general subject, the business of making appraisals, either for use in the settlement of claims for depreciation, for loss or damage, or in adjustments perhaps of claims connected with insurance matters. The full and complete covering of so broad a topic filled considerably more than 1,000 pages when a revised edition of the author's work, "The New Building Estimators' Handbook," was issued, and as the volume proved to be too bulky for convenient use, the arrangement was altered and the matter which deals with appraising and adjusting was arranged for presentation here.

ENGLISH ARCHITECTURE AT A GLANCE. By Frederick Chatterton. 52 pages. \$1.75. G. P. Putnam's Sons, New York.

THE issuing by many publishing houses of works on architecture proves the existence of popular interest in the subject which is both surprising and reassuring. Many of these volumes deal with what might be termed the "elementary" phases of architecture's study, and treat of the names of the architectural styles, their derivation and chief characteristics, all this being matter which of course forms a strong and necessary foundation for later and more extensive study of the subject.

In this little volume, for example, the author discusses the English styles, from the Norman to the late

Georgian, when English architecture (in common with architecture over most of the world) might be said to have reached the end of a course of orderly and organic development and to have entered a state of chaos excepting for occasional "revivals" of use of some definite earlier style. The work is one volume of a series on architectural types and furniture which goes with them.

THE FORESTRY ALMANAC. 225 pages. 6 x 8¼ ins. Price \$2. American Tree Association, Washington.

FORESTRY, as a science, is comparatively new in America. Our forests, which once covered so large a part of the country's area, appeared to be inexhaustible and more than equal to any demand that could be made upon them; but for more than a century the woodsman's axe has been at work, and as the lumber camps have been pushed farther and farther into the wilderness the forests have vanished before the onslaught of their busy sawmills. Forest fires have also wrought incalculable injury, and disease, which attacks trees as well as human bodies, has been at work in forests as well as in the public parks of large cities, where there is a gradual disappearance of what trees are left after years of neglect.

To correct these ills is the function of forestry. Reasonable care would provide for the constant renewal of the forests, and thus there would be assured a supply of lumber which could never fail. To aid in this movement national and state governments are cooperating, part of their work being the publication of books and magazine articles dealing with forestry. In this volume there is given a complete review of the subject together with a list of trees recommended for different localities.

PROVINCIAL HOUSES IN SPAIN

By Arthur Byne & Mildred Stapley

ARCHITECTS value Spanish types of domestic architecture because of their simplicity of design and plan, and also because they are easily developed in materials inexpensive and easily had. Spain offers a choice of several kinds of residence architecture, types sufficiently different from one another to afford considerable range of selection, yet all possessing the same strength and virility, the excellent lines, the same graceful but unaffected grouping, and the discriminating use of detail which renders distinguished so many Spanish domestic buildings.

Houses in various parts of the Spanish peninsula, particularly the buildings of medium size in rural districts or provincial towns, offer excellent precedent for use in different parts of America where climate conditions are about what prevail in the provinces of Spain.



IN this volume two well known writers on Spanish architecture and decoration review the various forms which are given to the small or medium sized house in Spain. To render the work as helpful as possible to architects, the authors have included many plans and drawings of different kinds, details of such exterior parts of buildings as friezes, cornices, windows, timber overhangs, soffits and balconies, or of such interior parts of the structure as ceilings, fireplaces, doors and stairways. Part of the work deals with the tiles, pottery, ironwork, plaster in relief and the other forms of craftsmanship which contribute so much to the excellence of domestic architecture in Spain. It is a work likely to be invaluable to the designer.

The book contains text and 190 plates 12½ x 16 inches, and is bound in cloth. Price \$25, postpaid.

ROGERS & MANSON COMPANY, 383 Madison Avenue, New York.

BOOK DEPARTMENT

The Modern Schoolhouse; Its Design and Plan

NO student of architecture whose examination of current work has extended over a number of years can have failed to note the change which has come in the architecture of school buildings. This has been due, first of all, to the securing of a new point of view from which the school problem is seen by architects and the public in general, and this viewing of the problem from a new angle has brought about the production of an entirely new type of building devoted to school use.

Who does not remember the public school as it existed a decade or two ago?—a gaunt, bare structure, the bleakness of which suggested its utility, the absolute necessity of providing educational facilities for growing children, which came first to mind when the public school was thought of? The bleakness of its exterior and the usual bareness of its surroundings were likely to be surpassed by the ugliness of its interior,—its gaunt classrooms, endless corridors, and the absence of many facilities which even the most unenlightened might have seen to be necessary. Somewhat later there came use of a slightly different treatment,—or possibly the large expenditure which its construction extorted from the public purse seemed to demand a different treatment; so the schoolhouse began to receive (as far as its exterior treatment went) an over-use of ornament, often meretricious and sometimes actually inappropriate, and its halls and classrooms lost at least something of their bleak ugliness. Then it was that the visible, tangible results of this changed attitude began to be apparent. Architecture's real function is to "build beautifully," to clothe utility with a garb of dignity and grace, and to express the purpose for which a building exists in terms which are unmistakable and which give the building grace of form and beauty of aspect. If this be architecture's function in the case of a structure of any type, how much more so in a building wherein future men and women are to be trained! How necessary to provide for the young during their most impressionable years surroundings which are themselves calculated to exert a helpful educational influence, and to symbolize by visible simplicity and external dignity the education of mind and heart for which schoolhouses exist! This necessitated the study of the problem at

the hands of a group of architects whose names are now familiar to anyone for whom modern architecture has much meaning,—and not only study but experiment as well, while along with all this effort on the part of architects there went effort on the part of the manufacturers of all kinds of equipment designed for use in schools.

Some years ago there occurred the publication of a work on Grade School Buildings to which the volume now under review is a sequel. The earlier work dealt fully with the progress then made in school architecture, and it acted no doubt to stimulate the efforts of those then engaged in the study of school buildings. It is fitting, therefore, that a decade later publication should be made of another volume to place on record the results of further progress. It is this which the newer volume does, and here there are given the views upon the subject of specialists in different divisions of the schoolhouse problem, presenting in text and illustrations evidence of the excellence of present-day building. The architect's point of view, for example, is given by Walter H. Kilham, of Boston, whose firm (Kilham, Hopkins & Greeley) ranks well among architects suc-

cessful in schoolhouse building. A superintendent of schools writes on "The Size of Classrooms," and a lighting engineer discusses the important matter of "Artificial Lighting in the School." Development of schoolhouse grounds is covered by the landscape architect of the Cleveland Board of Education, while an educational engineer writes on the subject of "The Dependence of School Architecture upon Electrical Engineering." With this excellent symposium as a beginning, the work goes on to a complete presentation of the designing and planning of grade school structures, giving views of exteriors and interiors together with floor plans of school buildings of all sizes, in rural districts as well as in cities and towns in different parts of the United States. We particularly admire the taste which has been shown by designers in using architectural forms and types of plans which are historically identified with different sections of the country, and more especially with New England.

GRADE SCHOOL BUILDINGS: Book II. Compiled and Edited by William George Bruce. 400 pages, 7 $\frac{3}{4}$ x 10 $\frac{1}{2}$ inches. Price \$10. The Bruce Publishing Company, Milwaukee.

Books Reviewed

Grade School Buildings.
Architectural Construction: Vol. I.
Practical Steam and Hot Water Heating, and Ventilation.
The Colonial House.
House & Garden's Second Book of Houses.
Small Family Houses.
English Furniture at a Glance.
Good and Bad Manners in Architecture.

Books Received

The Way to Sketch. \$2.50. (Oxford University Press.)
Small Country Houses of Today. Vol. III. \$10 Net. (Charles Scribner's Sons.)
Editorial English. \$2.50. (Roy Press.)

Promoting and Financing Coöperative Apartment Buildings

*A Statement of the Forms and Methods
Approved by the Coöperative Apartment
Section, National Association of Real
Estate Boards, with Complete
Sample Documents*

¶ Erection of coöperative apartment buildings, already proceeding upon a considerable scale in different parts of the country, would be far more general had there been during the past few years any recognized source of general information upon the subject. Each time THE FORUM'S pages have contained an article upon some particular phase of the matter, letters of inquiry have been received at THE FORUM'S offices which amply proved the need of a volume which would sum up and present a review of the theory and practice of the coöperative apartment house movement, the practical value of which has now been widely demonstrated.

¶ Such a work has now appeared, prepared in the light of considerable successful experience and covering every phase of the organization and administration of a coöperative apartment house project; the forming of the owning corporation; the sale of tenant owners' stock; arrangement of owners' leases; erection of the building, and the conducting of the affairs of the association when once the building has been constructed and is in operation.

¶ To render the work of as practical a value as possible, inclusion is made of all the legal forms likely to be required, such as stock certificates, leases for stockholders and subleases, and the blanks used in the office of the association's secretary or bookkeeper. A number of pages are given up to describing various forms of publicity which have been found useful in attracting members to coöperative apartment house groups, and the volume contains the information which, regarded from every point of view, has been required. It should supply a powerful stimulus to the coöperative movement by promoting a correct understanding of its fundamental principles.

Price \$20

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

ARCHITECTURAL CONSTRUCTION, Volume I: Analysis of Construction, by Walter C. Voss and Ralph Coolidge Henry. 1267 pages, 9 x 11½ ins. Fully Illustrated. Price \$20 Net. John Wiley & Sons, New York.

IT is hardly necessary to call attention to the fact that the word "architecture" when used in its historical sense designates far more than is usually implied when the word is used today. The average American, when he hears the word, thinks of architecture as the profession of an individual or a number of individuals who draw the designs for the exterior of a house, plan its interior arrangement, detail its trim and sometimes superintend its erection, occasionally (though less frequently) carrying out also the building's decoration and furnishing. But a glance at the past will show that in older days architecture meant all this and more; it included what is now regarded as the work of the town planner, the landscape architect, the building contractor, often the subcontractors of all sorts, and indeed all these forms of activity have come into existence as separate departments only since the profession of architecture became narrowed to what are its present limitations.

Perhaps something of the broad scope of architecture's original meaning was in the minds of the authors of this work when they undertook the preparation of a volume so massive and so inclusive, for it covers literally every detail of the subject, viewed from every standpoint. It begins, for example, by discussing the qualifications of an architect and defining his duties (from the present-day point of view, that is), and then deals with the choice of a site and the orientating of the building, upon which so much of its success depends.

With this as a beginning, the authors take up the consideration of several specific buildings of as many different types, each the work of some well known office, in each instance giving illustrations of the exterior, the more important interiors, careful reproductions of the plans, working drawings, interior details, etc. Thus the consideration of a dwelling of the cottage type deals with a house near Boston designed by Derby & Robinson, the reproductions of plans and details showing drawings made with the care and attention to small things always given to the work of this office. This section (which alone takes up 131 pages) goes fully into every detail in connection with this particular cottage: Work Preliminary and Incidental to Construction; Concrete Work; Brick Work; Carpentry; Roofing and Sheet Metal Work; Lathing and Plastering; Painting and Glazing, etc. All these are discussed.

Consideration of the somewhat larger suburban house deals with a brick residence at Newton, Mass., designed by Ralph Coolidge Henry; one of the authors of this work. Discussion of the larger country house is concerned with the Lehman place at Tarrytown, N. Y., by John Russell Pope; the city residence, with the Hayward house, designed by Guy Lowell; the school, with the John Adams Senior High School at Cleveland, by Walter R. McCornack; the church, with Calvary Church, Pittsburgh, by Cram, Goodhue & Ferguson, and the office building, with the Bush Terminal by Helmle & Corbett. All this is supplemented by chapters on various building materials and different kinds of service equipment, and the work closes with a survey of current practice in landscape architecture and a consideration of the different trees and shrubs to be used.

The entire volume is well and thoughtfully prepared, evidently in view of long experience in large and active architectural offices. The subject which it covers is not likely to receive to thorough a treatment for at least a generation, and by then there may come radical changes in regard to many forms of architecture and building practice. We particularly admire the thoroughness with which the book has been prepared, and in explanation of this thoroughness the authors say: "Experience in teaching and in professional practice has indicated nothing more plainly than that the focusing and holding of a student's or draftsman's interest are prerequisites to his independent thinking. The choice of tangible realities in the form of buildings recently executed, rather than theoretical material, to exemplify each structural step has been made with a view to enlisting and stimulating this highly practical interest."

PRACTICAL STEAM AND HOT WATER HEATING AND VENTILATION. By Alfred G. King. Fifth Edition. Entirely Revised and Enlarged. 400 pages, 6 x 9 inches. Price \$4. Norman W. Henley Publishing Co., New York.

HHEATING and ventilation, particularly when considered in relation to each other, constitute a subject so large and with so many ramifications that a volume of goodly size is demanded for the discussion of a matter so important. Actual generation of heat, steam, hot water or whatever else, involving the consideration of apparatus of different kinds, is a subject which engages the attention of many, and added thereto is the question of the piping, the valves, and all the other details for the distribution and control of heat and for securing its use in the most economical way, while besides both these subjects there is the consideration of measurements, capacities, accessories, and all the other items which are important to architects and engineers when heating is under discussion. So too with ventilation, far more important now than ever, since rooms in buildings of many kinds are now absolutely dependent upon forced ventilation to render them habitable, and ducts, dampers, fans, and other details of apparatus become items of prime importance.

Mr. King, the author of this excellent treatise on the subject, has already written "Questions and Answers on Steam, Hot Water, Vapor and Vacuum Heating." Here he divides his subject into 36 chapters, each dealing with some one phase of the matter. No more complete work on modern heating and ventilation has ever been published. It is invaluable to architects, builders, contractors, steam fitters and others having to do with building. It is a practical work by an expert.

THE COLONIAL HOUSE. By Joseph Everett Chandler. 222 pp., 140 plates, 7 x 10 ins. Price \$5. Robert M. McBride & Co., New York.

APPPEARANCE of a second edition of a work is naturally an indication of popular approval. The original edition of this study of Colonial architecture, published in 1916, was helpful to both architects and their clients for its careful and critical presentation of a subject which has suffered from being much carelessly written about. The work is fully as valuable as when first issued eight years ago. A particularly helpful detail is the inclusion of floor plans of a number of Colonial houses, the exteriors of which are quite familiar.

HOUSE & GARDEN'S SECOND BOOK OF HOUSES. Edited by Richardson Wright. 191 pages, 9½ x 12¾ ins. Price \$4. The Conde Nast Publications, New York.

POPULAR interest in architecture, evidences of the growth of which abound on all sides, is after all largely centered in the small house. The "small house" possesses what might be called "universality of appeal," and is interesting to many who might not be concerned with the office buildings, churches, apartment buildings and other structures which might well engage the attention and interest of architects and certain of their clients.

What more practical, therefore, than presentation in book form of views and plans of small houses, "bungalows," camps, garages, etc., which have already won approval when published in the pages of a monthly magazine devoted to building, furnishing and decoration? The series of *House & Garden* books on these subjects, the publishing of which occurred a year or more ago, is evidently to be continued, and the appearance of this work marks the beginning of the advance. Many of the illustrations, as has just been suggested, have appeared before in *House & Garden*, but here they are collected for preservation. A large part of the volume is made up of wholly new matter, prepared by writers well qualified to discuss building design and plans, interior decoration and furnishing, and illustrations and floor diagrams are given which aid the reader in studying the subject. One useful detail, likely to be included in these books, is giving the addresses of architects whose work is presented.

SMALL FAMILY HOUSES. By R. Randal Phillips. 159 pp., 6½ x 9¼ ins. Price \$3.75. Charles Scribner's Sons, New York.

THIS volume by the Editor of *Homes and Gardens*, who is widely known for his published works on English architecture, is proof of the success with which the "modern English style" is being used in England. The buildings illustrated are all such as fall within the classification of "Small Family Houses," and they are built of many different materials, most if not all of which are being quite as much used in America as they are in England. The inclusion of floor plans adds greatly to the practical value of the work to architects and builders.

ENGLISH FURNITURE AT A GLANCE. By Charles H. Hayward. 106 pp., 5½ x 8½ ins. Illustrated. Price \$2.50. G. P. Putnam's Sons, New York.

THE close relation, in all the historic periods of architecture, between the design of buildings and that of their decoration and furnishing creates an interest in furniture in the minds of those whose chief interest is probably in architecture proper. Interest in architecture in fact is strengthened and stimulated by study of anything which so ministers to its dignity as does furniture with which a structure is developed.

In this volume, which apparently is one of a series, in which architecture and furniture are to be discussed, Mr. Hayward outlines the marks of the various English periods of architecture together with those of the furniture which went with them. The book consists largely of illustrations, drawings of pieces of furniture which exhibit the marks by which pieces of each period are identified, the illustrations being carefully chosen to show the differences in scale and proportion which use of woods, — oak, walnut or mahogany, — involves.

The Changing Amenities of Architecture

A Review by Robert McLaughlin

MR. EDWARDS, surveying a changing London, deplores the rude "pushiness" of buildings which by sheer size or great scale are outdoing and displacing some of their older and more reserved neighbors. It is not enough that a building be satisfactory in itself; it may be selfish or sociable, presumptuous or polite in relation to surrounding buildings. If it does not take a place in the ensemble, pleasing and in proportion to the functions of life it represents, it is guilty of bad manners in architecture. Mr. Edwards finds a serious and disturbing breach of architectural manners in the changes now going on in Regent Street. The even, pleasing skyline of John Nash's neo-Classical rows is suffering jogs and bumps. The delicate scale of shop fronts is being jarred by Roman-arched show windows. He is jealous lest the completed Bush Building challenge St. Paul's for the architectural supremacy of London. It may overtop Somerset House.

Mr. Edwards has a very definite conception of the correct skyline for a city street. His book contains a diagram showing a line of houses and shops that know their place, above which a small civic building may discreetly rise or a church politely but forcibly tower. He is greatly concerned and extremely ingenious in finding the best way to mask lavatory windows in the rear elevations of houses. He finds gables a disturbing element in city architecture. In this connection he publishes for the first time the only authenticated building by John Rus-

kin. The photograph shows a gabled, balconied, pointed arched house, set in a respectably horizontal row of early Victorian dwellings, very discreet and suitably decorous.

Skyscrapers are anathema to Mr. Edwards, disturbers of horizontal quiet, and aesthetically bad. Mr. Saarinen's Chicago *Tribune Tower* "looks as if it might be the habitation of some very tedious and retrograde kind of bee that was content to multiply the unit of its home in a most uninteresting manner." On grounds of propriety, the higher altitudes should be reserved for sacred buildings. If he is shocked at the ostentation of the first tall buildings in London, one wonders what he thinks of the plan in New York where to create the greatest impression one erects a very low building on an expensive plot of ground deserving of many stories of rentable area.

We deeply regret, with Mr. Edwards, the loss of Nash's subdued, charming architecture in Regent Street. But his conception of urban architecture as an agreeable setting for mannered gentlemen and matter-of-fact merchants is extremely limited. Architecture can be more than restrained or charming; its moods are many. It may be playful and carefree in its Baroque ramifications, or it may overwhelm by sheer dominating effect. Within his limits, Mr. Edwards writes in a manner interesting and readable, and pervaded with a relieving humor.

GOOD AND BAD MANNERS IN ARCHITECTURE. By A. Tristan Edwards. 44 Illustrations. Philip Allan & Co., Quality Court, Chancery Lane, London.

"THE ART OF TOWN PLANNING"

By H. V. LANCHESTER

THE importance of city and town planning has been fully recognized at all stages of world history, until during the past century the rapid growth of cities, particularly in America, outstripped all calculations, while the avarice and selfishness of real estate speculators in many places have thwarted the efforts of the few who might have properly directed civic growth. The result of this is now to be seen in many American cities, poorly planned or rather grown up upon no plans at all, the ugliness and inconvenience of which have forced upon public attention the necessity of a complete restudying of town planning and its effect upon civic values and public health and happiness.



BRISTOL, AND ST. MARY REDCLIFFE

IN this excellent volume the author deals with town planning both ancient and modern. Plans of many cities of antiquity are studied, and modern work in many parts of the world has been closely analyzed, the result being that by examination and study of what has been done more efficient plans and layouts may be prepared for cities and towns yet in the making. Mr. Lanchester dwells upon the importance of utilizing for the public good such natural advantages as

water fronts or water courses, and he rates at their full importance such matters as have a more strictly architectural interest, such as planning of open squares or parks, street widths, building heights, grouping, and arrangement of structures.

244 pages; 5 1/4 x 9 inches. Lavishly illustrated. Price \$7.50

ROGERS & MANSON CO., 383 Madison Avenue, New York

BOOK DEPARTMENT

Some Domestic Work of Sir Edwin L. Lutyens

A Review by LEIGH FRENCH, JR.

AN appropriate time has been chosen for the republication of this monumental volume of the work of Sir Edwin Landseer Lutyens. The award to Sir Edwin, early during the present year, of the gold medal of the American Institute of Architects, gives striking evidence of the high regard in which his work is held in America, a regard which, long present both here and in England, is reflected in the considerable following which this most able and versatile architect has built up here in the United States.

There is another reason why this volume is particularly opportune at this time. It gives a very adequate presentation of Sir Edwin's domestic work, together with the gardens, interior treatment, and personal and intimate touches which these require, and his achievements in this type of work mark the first phase of the accomplishments of this foremost of British architects. Of late years the work of Sir Edwin Lutyens has swung away from the designing of domestic structures and toward that of public and monumental buildings. Everyone knows the chaste beauty and simplicity of the Cenotaph, in Whitehall, and few architects have had the opportunity of creating so distinguished, vast and enduring a monument to themselves as has been presented to this architect in the creation of a whole capital city.—Delhi, the new capital of India. Thus it will be seen that the present volume marks the completion of one phase of an architect's work, which at some future date it is hoped will be supplemented by a second volume on the great monumental work of the same man, thus recording later achievements.

It is probably because Sir Edwin Lutyens has achieved such signal success in so many widely differing modes of expression that Sir Lawrence Weaver considers his work especially deserving of close and critical study. For this valuable faculty of adapting an honored tradition to the needs of his own generation, and also because of his inspiring influence, the author feels that a reprint of the original volume is timely and appropriate, an opinion with which architects generally, both in England and America, will heartily agree. As its title indicates, this work is distinctly a book of houses

and gardens. It includes, as well, a few examples of the restoration of fine old houses, severe tests of an architect's ability to work very closely within an old tradition. All aspects of this work are set forth in so interesting a manner that, aside from much valuable information for the architect reader, there is much pleasure in store for the general reader, who reads for pleasure, or possibly for information.

Sir Edwin sees each of his problems as a whole. His houses invariably fit perfectly their natural sites, and because of their unity of place and architectural style they acquire the character of "livableness," always a distinguishing mark of the great old houses of England. He is a past master of the "picturesque" in architecture, and his compositions are invariably so carefully studied that from all aspects they form charmingly arranged pictures. Each house has its distinct personality, which retains its consistency from all angles, owing to the author's study of his problem as a whole; undisturbed by an over-emphasis upon any special feature. Fine proportions have been at the basis of this unbroken series of beautiful houses, fine proportions emphasized by interesting line, by variation of textures and charming combinations of color. The compositions are varied and possess great dramatic contrast between their parts, which are, however, welded into

consistent wholes. There is evidenced thoughtful study in the relations between broad, unbroken masses of building and others interestingly broken with fenestration, and with rooms contrasting in both plan and elevation.

In reviewing this work one should not fail to give a word to the author, Sir Lawrence Weaver. Throughout a long series of publications on widely varied subjects, Sir Lawrence has shown his regard for the essential soundness of English architectural tradition. Of all the architectural critics in England, he has done the most, perhaps, to present the great traditions of the past to the builders of the present, and now we find his criticism and appreciation directed toward modern work,—a fact which alone should indicate the lasting value of the work.

HOUSES & GARDENS OF SIR EDWIN L. LUTYENS. By Sir Lawrence Weaver. Price \$25. Charles Scribner's Sons, New York.

Books Reviewed

Houses and Gardens of Sir Edwin L. Lutyens.

Meeting House of the First Baptist Church in Providence.

The Story of Architecture.

Book of Home Furnishing.

Editorial English.

Gardens In and About Town.

Wood Finishing.

Swedish Architecture of the Twentieth Century.

Books Received

The Dome of the Rock in Jerusalem. \$42 Net.

A Short History of the Building Crafts. \$3.50 Net.

Rélation in Art. \$6. (Oxford University Press.)

Problems in Architectural Drawing. \$1.08. (Bruce Publishing Co.)

Principles of Decoration. \$3.50. (Charles Scribner's Sons.)

GRADE SCHOOL BUILDINGS; BOOK II

IN no department of architecture have the last ten years seen quite the progress which has been made with schoolhouses, a class of buildings of the first importance, since they exert a strong influence upon their communities, and by their architectural excellence or the lack of excellence they elevate or lower the architectural standards of entire districts. Study of school structures, particularly at the hands of a group of well known architects, has resulted in their being given a high degree of architectural distinction and dignity in the way of design, while study directed toward their planning and equipment has led to their being practical and convenient far beyond what was regarded as an advanced standard of efficiency even a few years ago.



Kensington Schoolhouse, Great Neck, N. Y.
Wesley Sherwood Bessell, Architect

THIS volume, a companion to another published in 1914, records the results of endless study and experiment in different parts of the country, summed up and presented. By illustrations of exteriors and interiors, by floor plans and carefully written descriptions and articles by well known architects and educators the present high standard of schoolhouse design is made plain, and these results which have been achieved by a few architects and school boards are thus made possible to all architects who are interested in schoolhouse design. The compiler has selected from almost 1000 exteriors and floor plans the school buildings to be illustrated, and the volume records "a process of innovation and elimination, namely, the introduction from time to time of features which have been deemed desirable and practical, and the elimination of things which, owing to changed school methods, are no longer required."

400 pages; 7 $\frac{3}{4}$ x 10 $\frac{1}{2}$ inches
Profusely Illustrated; Price \$10

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

THE MEETING HOUSE OF THE FIRST BAPTIST CHURCH IN PROVIDENCE. A History of the Fabric. By Norman M. Isham. Issued by The Charitable Baptist Society on the 150th Anniversary of the Dedication of the House, May 28, 1775.

THE history of its old Baptist Meeting House is closely and intimately bound up with that of Providence itself. As one motors through the city and passes the old building, calm and serene and surrounded by its ample plot of closely clipped lawn, one scarcely knows whether most to admire the severely beautiful, finely drawn lines of the building itself, the graceful soaring of its marvelous spire, or the calm, unruffled dignity with which the old meeting house has faced the changes of its 150 years, which have wholly altered its setting.

When in 1774 the congregation of the First Baptist Church found that it had outgrown its meeting house, the planning of its successor was recognized as a duty requiring the utmost thought and study. The churches and meeting houses of Boston, where a committee went in search of inspiration, seem to have offered but little of interest, but the same committee became deeply impressed, and was considerably influenced, by various churches in England by James Gibbs, notably St. Martin's-in-the-Fields, drawings of which were contained in his "Book of Architecture." The plan of the new meeting house was not a strict following of any existing building, though its spire, one of the most graceful and delicate in America, was undoubtedly based closely on the teachings and drawings of the Gibbs work; the method of its framing is made plain by the diagrams of Plate 12 in Mr. Isham's book, the framing made up of several stages, not resting one on the top of another, as might be supposed from the finished exterior, but "telescoped," so to speak, the upper into the lower. No careless, slipshod construction in 1774!

This work is a carefully prepared and well illustrated history of a famous building and of the alterations in its fabric and furnishing which changes of custom have brought during a century and a half. It was prepared by Mr. Norman M. Isham, F. A. I. A., of Wickford, R. I., through whose courtesy a copy has come to THE ARCHITECTURAL FORUM for examination and review.

THE STORY OF ARCHITECTURE THROUGHOUT THE AGES. By P. Leslie Waterhouse. 272 pp., 4 x 6 $\frac{1}{4}$ ins. Price \$2. D. Appleton & Co., New York.

STUDY of architecture, which today is interesting to many, presents at first view what seems to be a maze of technicalities and seems to demand more study and application than any but the most enthusiastic are quite likely to give to it. Perhaps to encourage those whose interest might not be equal to the study of larger works this helpful little volume has been prepared by a professor at Christ Church who is also a Fellow of the Royal Institute of British Architects. Exceedingly well written and adequately illustrated, it surveys the history of what the author calls the "oldest of the arts" beginning with a chapter on Egyptian Architecture and ending with Architecture Today—which means architecture in America and Great Britain. Nothing of vital importance has been sacrificed to the brevity necessary to cover a subject so large in 261 small pages, and the work's accuracy as well as its completeness should recommend it to students of architecture or to the public in general.

October, 1925

THE ARCHITECTURAL FORUM BOOK DEPARTMENT

47

THE BOOK OF HOME FURNISHINGS. By Ross Crane. 269 pages 5¼ x 7½ ins. Price \$3. F. J. Drake & Co., Chicago.

FROM among the countless works on household furnishing and decoration which are being published there are a few which seem destined to serve a really useful and constructive purpose. "Interior decoration," like "Colonial" architecture, has suffered much from being carelessly written of by people who know little if anything about it, but whose opinions are taken seriously by many who accept blindly whatever appears in printed form,—particularly when it appears between the two covers of a book! Mr. Crane's advice to those interested in interior decoration is sound and valuable indeed, and his color schemes and diagrams for the arranging of rooms are excellent. It seems a pity that better photographs of interiors could not have been secured, where actual interiors are illustrated, and the frequent lapses of the text into a "fictional" or "colloquial" style constitute a regrettable error in the matter of taste. Probably, however, Mr. Crane has found that sound advice on any subject must be disguised, made palatable, and given a sugar coating to be acceptable to the public! A close study of the teachings of the work would be of great value to most of the interior decorators now at work, and it is particularly recommended to architects.

EDITORIAL ENGLISH. By Arnold Levitas. 322 pages, 5½ x 8¼ ins. Price \$2.50. The Roy Press, New York.

GROWING appreciation of the value of good English, adequate punctuation and similar details of book and magazine publishing brings forth a number of manuals on the general subject, many of which are useful indeed. At the same time it may well be doubted whether any work could be prepared which would command the entire approval of all those for whose use it is designed. Every publishing concern forms, in the course of time, its own "use," the result sometimes of a habit or custom in the editorial department and sometimes of personal whims or preferences of someone in charge. Thus during the lifetime of the late Mr. Bennett elaborate rules were established for guiding the staff of the New York *Herald*; something quite similar was done for Mr. Dana's *Sun*, and quite lately one large publishing house has seen fit to dignify the matter by issuing a volume on the intricacies of its own "use." A language such as English, built up as it is of words from many languages, ancient or modern, is difficult to regulate or govern by precise rules, particularly when there exists no body fully qualified to decide what is correct. One often wishes that in English-speaking countries there existed a ruler (such as governed in pre-war Germany) who could decide, by exercise of his divine right, upon the spelling of a word or the use of a preposition! As it is, one can only study the best models, and upon such a study establish a custom for one's individual or office use.

Of quite a number of somewhat similar works we consider this by far the best. It has been prepared in view of long experience in editorial work, publishing and lecturing, and it is wholly free from the fads and idiosyncrasies which sadly mar, when they do not ruin, so many otherwise useful manuals. Its excellent teaching in regard to the use of architectural terms should commend it to writers on various subjects for the architectural press.

GARDENS IN AND ABOUT TOWN. By Minga Pope Duryea. 183 pages, 6 x 9¼ ins. Price \$5. E. P. Dutton & Co., New York.

THOSE who make an effort to keep abreast of the progress of architecture,—even of domestic architecture alone,—are sometimes inclined to marvel at the hold upon popular fancy which has been obtained by gardens and gardening. It is as though Americans had taken a leaf from the book of their European cousins, particularly their English cousins, to whom a dwelling of any size, anywhere, without its garden is unthinkable. Travelers to Italy or Spain bring away pleasant memories of the glimpses of a cool, green cortile or patio had as one passes an open door or gate in some apparently uncompromising brick or stucco wall, and many remember the pleasant little breathing places tucked away behind or between some of the old houses in New Orleans,—relics, perhaps, of the French or the Spanish regime, both of which have existed in New Orleans.

So prevalent and widespread, in fact, is interest in gardens that they are being made even in cities. One never dreams of the possibilities latent in even the most ordinary of city backyards until one such dreary area has been transformed into a spick and span little garden, and the possibilities are multiplied when many such backyards are combined to form, for example, such a glorious garden as one which exists in the heart of the East Side of New York, hidden away between Third Avenue and Second, a number of individual gardens, but so separated by low parapets that the effect is that of one magnificent garden in which are fountains, old Spanish or Italian ironwork, and some fine old trees which have somehow managed to survive the vicissitudes which beset plant life in New York. Some of the most interesting gardens are those which cover the smallest areas, and when one has no area at all in which to garden, there are always the possibilities (by no means to be despised!) held forth by window boxes.

Mrs. Duryea's book is calculated to increase the number of gardens in and near cities;—in fact many of the number already existing are probably due to her stimulating and encouraging teachings, which are calculated to point out the possibilities which lie hidden in even the tiniest area of ground or roof in the wilderness.

WOOD FINISHING. By Harry R. Jeffrey. 177 pp., 5¼ x 7½ ins. Price \$1.50. The Manual Arts Press, Peoria, Ill.

MOST of the disappointments which follow the use of stains, fillers, varnish and other materials used in the finishing of wood surfaces may be traced to the lack of proper directions,—or rather to the attempt to follow directions which are so technical as to be non-understandable. This useful work, one of a number of volumes on craftsmanship of various kinds, has been prepared "to put before teachers, students and amateur workers information regarding the most common processes of wood finishing, and to present this information in a practical, non-technical manner suitable for the average school shop or the workshop of the average home."

All this is exceedingly well done, and the volume will be equally valuable in the home, the shop, and the trades school. We do not know of a work which so well covers a large subject in small space. The chapter entitled "Finishing Floors" is alone worth the cost of the entire volume, for the rapid deterioration of floors which often takes place is likely to be due to poor finishing in the first place, due in countless instances to ignorance.

Modern Sweden and Its Architecture

A Review by ROBERT McLAUGHLIN

STUDY of architecture is likely to involve the selection, as its subject matter, of whatever is of most immediate and practical interest. This precludes, of course, studying or the acquiring of even a superficial knowledge of many types of architecture which possess, perhaps, more than usual interest, types or forms which have been perhaps slowly growing up for centuries, but which are unknown or at least little known to Americans, because they have been crowded out of the popular vision by others more immediately useful. Such, for example, is the architecture of Sweden, a country cut off from close contact with America and most of western Europe, not so much by its seas and geographical remoteness as by its possession of a foreign or at least a "different" civilization and a language peculiarly its own, which give a certain isolation.

The volume under review is a very valuable book because of its subject, and also because of its manner of presentation. In spite of the fact that Sweden's place in past architecture has not been particularly distinguished, her contemporary buildings certainly arrest attention. One who has followed the development of Scandinavian architecture during the past will feel more at ease in the presence of these modern buildings. An essential personality is imparted to them by climatic conditions,—roofs are steep; windows are as small as will admit sufficient light; exterior detail is not wasted where it might count only in a southern atmosphere. Add to this a strong manifestation of a racial temperament, which may be somewhat the product of the climate, and there is enough to give any naturally evolved art plenty of individuality. Therein lie the chief reasons Swedish architecture may appear bizarre to eyes trained in other countries; certainly it is not because of a straining for the new. Swedish architects have not thrown the past to the four winds. Their work is essentially in the tradition, meaning by this something far deeper than designing with pencil on paper and eye on a measured drawing before the designer.

Present-day architects in Sweden are concerned with the finest traditions of great ages in building,—the priceless heritage which monuments of the past hold for those who will do more than stand stricken and adoring before them; who will seek to learn from them the "means whereby" these results were obtained. This is simply attempting to apply the ideas and terminology of

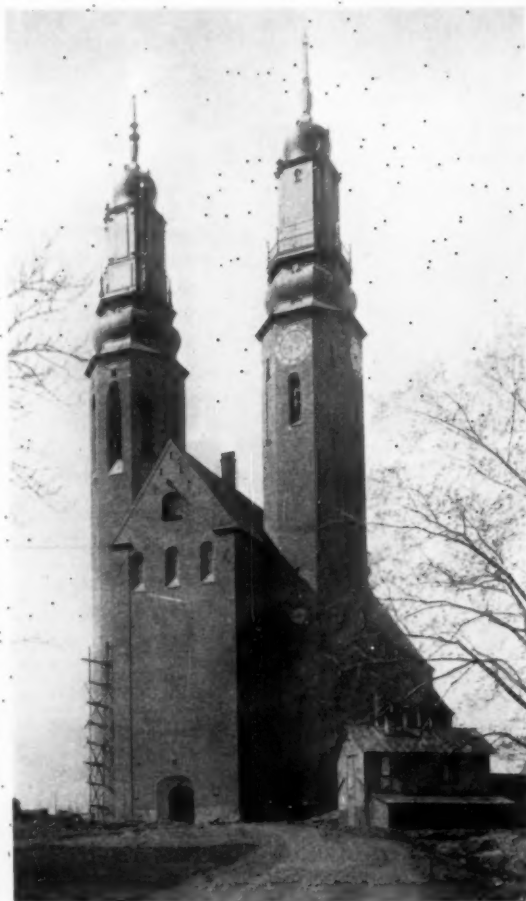
Mr. F. Mathias Aléxander to architecture. To believe that tradition means reproducing faithfully and even with finest taste the monuments of the past, results in a skin-deep architecture where old beauties become new frills. Swedish architects are keenly and reverently aware of these noblest of traditions: essential truth

clothed in architectural form; a striving for that most elusive but satisfying beauty, which is simplicity; a sympathy for and alliance with the finest craftsmanship. The past offers us her achievements for our delight, her methods of attainment for our interest and study, and our profit.

But this book, I wish the illustrations were larger, but then if they were, they would be fewer. There are upwards of 300, the range of titles including a technical school, storage warehouses, a cemetery, a "movie" theater, a power plant, and workingmen's cottages, as well as the public buildings, churches and great houses such as in America still constitute our chief show of architecture. Professor Lallerstedt's Stockholm University for engineering and architecture is here. There is no attempt at a grand, balanced, domed grouping, as in our Technology buildings at Cambridge, nor does the architect go to the other, modern French extreme, striving to express the purpose, construction, and every other inherent quality of the building in its exterior

form. Careful, painstaking study of wall surfaces and openings is characteristic of the best modern Swedish work. Mr. Eliel Saarinen's work is not shown here, though I believe Sweden has a strong claim on him. There are churches and houses built in the native timber fashion, and towers abound in this flat, level country.

The admirable introduction by Mr. Ahlberg, himself a practicing architect in Stockholm, is interesting in describing facts and extremely valuable in setting forth the point of view behind the work. He himself mentions the need for an evaluation of modern Swedish architecture from the outside at a proper perspective. It is to be hoped that this book will arouse such discussion, for the architecture of any country has much to learn from the rest of the world and usually much to give, and broad dissemination of ideas and full acquaintance with what is being done are helpful to architects everywhere.



A Church in Stockholm
From "Swedish Architecture of the Twentieth Century"

SWEDISH ARCHITECTURE OF THE TWENTIETH CENTURY. Introduction by Hakon Ahlberg. Preface by F. R. Yerbury. Price \$25. Charles Scribner's Sons, New York.

BOOK DEPARTMENT

The Work of an Eighteenth Century Architect

A Review by ROBERT McLAUGHLIN

THIS volume, coming as one of the series which deals with Masters of Architecture, is particularly welcome in clarifying the rather shadowy idea of Sir John Soane and his work which generally prevails. The architect is undoubtedly far less present in his work than the painter or sculptor. Architecture is to only a small degree an expression of the individual man. The economic element, which is being emphasized in current

writings, is largely the architect's master and is responsible for new and interesting forms. Occasionally a figure appears who seems to stamp his architecture with something quite individual.

Soane came to London in 1768, during the most flourishing period of the Palladian era. A pension from the king, secured through the interest of Sir William Chambers, sent him to Italy for three years. Direct contact with classic sources was bound to have its effect on the vital, original mind which Soane undoubtedly possessed. He was the leading early exponent of the English classic revival in active practice. Piranesi, through his superhuman output of powerfully imaginative studies, had kindled enthusiasm for direct contact with classic sources. Stuart and

Revett furnished the data which brought these sources into the London architect's office, but, like many Englishmen, Soane regarded study of Palladio and other theorists of the Renaissance as acquiring knowledge obtained at second hand. Soane shared with Piranesi a love for the motives and paraphernalia of classic architecture, by the sheer weight of whose collective effect richness could be produced. His early years were filled with elaborate and imaginative schemes for bridges and palaces,—never executed. His later years were devoted to the collection of the drawings and fragments now housed in the Museum which bears his name. Soane, the son of a master bricklayer, was keenly alive to the value that an architect derives from surrounding himself with sources of beauty and learning, and he put his knowledge to account.

He was too lone a figure, too original without being supremely great, to have executed a great deal of work, and much that he has done has been destroyed. His chief work, a large part of the Bank of England, is receiving special attention now, as alterations are in progress which will carry that structure up into the air. His

work there has most of the characteristics typical of English monumental architecture of the period. The English have seldom been at home in monumental work. During Soane's period, at any rate, grandeur was frilled with fussiness, simplicity becomes bareness, and richness is usually misapplied. Soane shows little evidence of overcoming this lack of organization and unity. His work is important because of the often unsatisfactory

but always interesting element of life and originality that he imparts to his buildings. His exteriors show a restlessness that might have found exercise in a Baroque period. His interiors, on the other hand, often show a plainness and thinness that is depressing. The Consols and Colonial Offices of the Bank of England certainly suffer by comparison with a similar scheme in the main office of Mr. Morris' Cunard Building in New York.

Turning to his domestic work, Soane's stock at once picks up; here, like most Englishmen, he is thoroughly at home. The facade of his own residence, now the Soane Museum, will afford a delightful surprise to the reader who has not known of its charm. Quiet and reserved, it is in the excellent taste of the

London town house. We feel that Mr. Birnstingl fails to do justice to the spontaneity and unusual arrangement of the entrance bays, which seem quite satisfactorily tied in with the flanking wall treatment. One of the most interesting of Soane's buildings is the mausoleum at the Dulwich Gallery. Its manner of building up from cruciform to square is very successful, and its fine, flat surface detail is beautiful in character and very well handled.

This book is well worth while, not because it reveals any great amount of good architecture, for there is much that is quite bad illustrated here. It does, however, present a most interesting figure, original and provocative. Soane taught and lectured widely on architecture, brought together his remarkable collection, devoted his energies to the designing and erecting of buildings, and (far from least of all) he introduced fire-resisting construction and a type of central heating into England. Mr. Birnstingl calls him the first modern English architect.

SIR JOHN SOANE. By J. J. Birnstingl. In series of Masters of Architecture. Edited by Stanley G. Ramsey. 30 pages and 35 illustrations from photographs by F. R. Yerbury. Price \$2.50. Charles Scribner's Sons, 597 Fifth Avenue, New York.

Books Reviewed

Sir John Soane and His Work. Concrete, Plain and Reinforced: Vol. I.

Principles of Decoration.

Terra Cotta of the Italian Renaissance.

Masterpieces of Spanish Architecture.

Problems in Architectural Drawing.

The Dome of the Rock in Jerusalem.

Bertram Grosvenor Goodhue, Architect and Master of Many Arts.

Books Received

Monuments of Christian Rome. \$3.

English Pleasure Gardens. \$2.50.

(The Macmillan Company).

French Provincial Architecture. \$20. (Charles Scribner's Sons).

TERRA COTTA OF THE ITALIAN RENAISSANCE. 200 Plates, 9 x 12 ins. Price \$3. The National Terra Cotta Society, 19 West 44th Street, New York.

ARCHITECTS who are concerned with the careful and critical study of precedent, particularly as it applies to the ornament and decoration of actual structure, owe much to the research which has been involved in the publication of the various books and brochures issued by the National Terra Cotta Society. This organization has never been content to skim the surface of a study of the history of terra cotta, and to secure the data which have made its publications so valuable, trained architects have been commissioned to search out the districts, chiefly in Italy, where the masterpieces of the terra cotta workers' craft exist and secure data which when offered later in published form, have added immeasurably to the equipment which makes much of our modern architecture so accurate. So with the present volume, based upon the researches of Arthur Frederick Adams during the summer of 1923, the 200 photographs from which these plates were made having been selected from a far greater number taken by him at the time.

Terra cotta achieved its greatest triumphs in Italy during the Renaissance. Architects of the period realized that by its use ornament and color which could be had in no other way were to be had at no great cost, and their patronage supplied the demand without which no craft can flourish. To this cooperation between architect and craftsman are due the matchless examples of terra cotta, as beautiful today as centuries ago, with which are identified the great names of Luca della Robbia, Donatello, Bramante, Brunelleschi, Michaelangelo and Alberti, and many other great Italians.

Modern workers in terra cotta have furnished undoubted proof that the masters of the past produced little if anything which could not be made today provided the demand which stimulated their efforts existed now. Much admirable work in terra cotta has been produced, and much is continually being done, and yet one wonders why the revival of the wide use of this material comes so slowly. Many of the motifs supplied in this volume need little or no adaptation to make them suitable for use today, and it is possible to fire pieces of far greater sizes than could be placed in kilns used centuries ago, owing to improvements in kiln building.

This excellent volume is essentially for the use of the designer, and in suggesting the vast possibilities which lie in the use of terra cotta it will undoubtedly fulfill its destined purpose with considerable benefit to architecture.

MASTERPIECES OF SPANISH ARCHITECTURE; Romanesque and Allied Styles. 215 pages. 8 3/4 x 11 1/4 ins. Price \$6. The Pencil Points Press, Inc., New York.

It would be difficult to over-estimate the value to architecture of reprints of works on design which by reason of their rarity are now almost unprocurable. To the "Library of Architectural Documents," which already includes three excellent volumes, there is now added this important work on Spanish architecture, a reprint of plates or portions of plates from the great work, "Monumentos Arquitectonicos des Espana," published by the Spanish Government during the last century. The selection of the plates has been made with considerable care and taste, and the descriptive text by John V. Van Pelt adds to the book's interest and value.

PROBLEMS IN ARCHITECTURAL DRAWING. By Clinton V. Bush and Edgar D. Townsley. 64 pages and plates; 9 x 12 ins. Price \$1.08. Bruce Publishing Co., Milwaukee.

STUDENTS of drafting or architectural drawing often find difficulty in visualizing intelligently the details of construction which are portrayed in their drawings. The average student of drafting has no opportunity of watching the erection of a building such as is likely to be the subject of his studies, and, as every advanced student knows, it is important to have a visible demonstration of construction if the drafting of details is to be intelligently done. It requires actual experience if the principles of construction are to be understood.

This work might be described as a study or exercise in architectural drawing for a student who has mastered elementary mechanical drawing. The exercise deals with such drafting as would be involved in planning a small modern frame house of Colonial design, and the subject matter is divided into two parts, the first presenting each problem in pictorial form; either isometric or perspective, while the second shows the working drawings in orthographic projection. Along with the drawings themselves there are given ample instructions regarding planning and such structural details as walls, stairways, etc., all fully illustrated and made as plain as possible, the entire work being prepared with a view to aiding the student toward constructive thinking in terms which relate architectural drawing to actual building construction. The work has been prepared by Clinton V. Bush, Director of Industrial Education, at Jamestown, N. Y., and Edgar D. Townsley, of Ithaca, N. Y.

THE DOME OF THE ROCK IN JERUSALEM. A Description of Its Structure and Decoration. By Ernest Tatham Richmond. 111 pages besides numerous plates. 10 x 12 1/2 ins. Price \$42. Net. Oxford University Press, New York.

AS the Gothic cathedrals which arose in western Europe during the twelfth century and the thirteenth were visible expressions of fervent faith, there have been built in the East at various times structures which have been erected as symbols of veneration of sacred places or holy personages. Venerable Jerusalem enjoys the distinction of being held sacred by the Jewish and the Mohammedan as well as by the Christian world, and in addition to the spots made sacred by events in the life of Christ, venerated by Christians of all bodies, there are other spots sacred to Islam, and among them is the Rock, closely connected with the life of the Prophet.

This elaborate and superbly produced work is a record of the architecture and ornament of the "Dome," the structure which centuries ago was built over and around the Rock, the volume being prepared at a time when after more than 800 years Jerusalem was occupied by European forces. The typically Mohammedan architecture and the sumptuous ornament, largely of tiles and mosaic, forms in which the East has always excelled, render the "Dome" a masterpiece of oriental building, and its splendor has been shown in this volume by a large number of plates in color which are of great importance to students of design, while the structure itself is of interest to architects. The author, who is a Fellow of the Royal Institute of British Architects, writes from the point of view of an antiquarian and historian as well as from that of an architect, thus obtaining valuable vision.

CONCRETE PLAIN AND REINFORCED, Vol. I. By Frederick H. Taylor, Sanford E. Thompson, and Edward Smulski. With a chapter by Henry C. Robbins. Fourth Edition. 969 pp., 5 3/4 x 9 ins. Price \$8 Net. John Wiley & Sons, Inc., New York.

THE scientific study which is being made of concrete is due no doubt to its steadily increasing use in building and engineering operations of many kinds. Most architects and engineers, absorbed as they probably are in the claims and demands of varied practice, have little opportunity for the experiment and research to which progress in the use of any material is due; happily, however, architects and engineers have always been ready to make known for the general good any special knowledge of which they may become possessed, and thus what might be called the *materia* of the scientific use of concrete is made wider and deeper. So in this instance, for with the appearance of a fourth edition the present work has been entirely re-written and is appearing in three volumes, the first covering reinforced concrete design and construction, the second concrete materials and construction, and the third special structures in reinforced concrete, all this very carefully prepared in accord with the latest and most advanced practice.

Theory and methods have been presented in the most simple and usable forms; and several details, such as designs of columns of various types adapted to special uses, have been planned to accord with various specific city building codes, while the volume is replete with diagrams and tables of every kind. A work on concrete which would be more valuable to the engineer and also to students of engineering is not likely to appear soon.

PRINCIPLES OF DECORATION. By R. G. Hatton. 224 pp., 5 1/4 x 8 1/2 ins. Price \$3.50. Charles Scribner's Sons, New York.

GROWTH of good taste in domestic architecture, which has been going on during the last decade, has quite naturally involved growth of interest in interior decoration which is, of course, the logical complement of architecture if not actually a part of architecture itself. This interest has developed the establishment of many schools in which interior decoration is being taught and the publication of countless volumes on the subject, many of which are too superficial or casual to be of permanent value, but several of which are sufficiently useful to merit real and serious attention.

With studying a subject so broad it is necessary to divide it into various departments, and one of the most important is concerned with design, which may be considered from the standpoints of suitability, æsthetic quality, melody, scale, proportion, clearness and under several other headings, each of which requires study by anyone who would attain a firm grasp upon the subject.

Professor Hatton, who has already prepared a number of works on drawing, composition and perspective, is here concerned largely with design, treating historical design in a way as free as possible in order to develop independence on the part of the designer. As the Preface puts it, "the tenor of the book is, on the whole, to urge the decorator to approach his work with the intention of making it vivacious and effective, intellectual and interesting; and to proceed as if no decoration had ever existed before, not from conceit of his own abilities, nor in contempt of the past, but in order to get rid of the tendency to use inherited ornamental forms."

Any book reviewed may be obtained at published price from THE ARCHITECTURAL FORUM

GRADE SCHOOL BUILDINGS; BOOK II

IN no department of architecture have the last ten years seen quite the progress which has been made with schoolhouses, a class of buildings of the first importance, since they exert a strong influence upon their communities, and by their architectural excellence or the lack of excellence they elevate or lower the architectural standards of entire districts. Study of school structures, particularly at the hands of a group of well known architects, has resulted in their being given a high degree of architectural distinction and dignity in the way of design, while study directed toward their planning and equipment has led to their being practical and convenient far beyond what was regarded as an advanced standard of efficiency even a few years ago.



Kensington Schoolhouse, Great Neck, N. Y.
Wesley Sherwood Bessell, Architect

THIS volume, a companion to another published in 1914, records the results of endless study and experiment in different parts of the country, summed up and presented. By illustrations of exteriors and interiors, by floor plans and carefully written descriptions and articles by well known architects and educators, the present high standard of schoolhouse design is made plain, and these results which have been achieved by a few architects and school boards are thus made possible to all architects who are interested in schoolhouse design. The compiler has selected from almost 1000 exteriors and floor plans the school buildings to be illustrated, and the volume records "a process of innovation and elimination, namely, the introduction from time to time of features which have been deemed desirable and practical, and the elimination of things which, owing to changed school methods, are no longer required."

400 pages; 7 1/4 x 10 1/2 inches

Profusely Illustrated; Price \$10

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

The Work of a Versatile Genius

A Review by E. DONALD ROBB

A HANDSOME volume of drawings, sketches, architectural designs and reproductions from photographs of executed work, under the happily chosen title "Bertram Grosvenor Goodhue, Architect and Master of Many Arts," has recently come from the press

of the American Institute of Architects. While unavoidably duplicating much that was published some years ago in a somewhat similar volume, there is a great deal of new material in the present work, and, taken together, the two form a very complete record of the varied work of this gifted artist and architect. In addition to the large number of illustrations, there is an intensely interesting biographical sketch by the editor, Charles Harris Whitaker, and other articles of appreciation and personal reminiscence by Ralph Adams Cram, Lee Lawrie, George Ellery Hale, C. Howard Walker, and Hartley Burr Alexander. Goodhue's personal charm and the ideals which led him in the pursuit of solutions to modern architectural problems are ably and sympathetically set forth in the pages of text which

precede the illustrations and add much to the reader's appreciation and enjoyment. It is a comprehensive work.

Careful study of Goodhue's work, from his early days to those of his mature years, shows a gradual and consistent development away from traditional forms and toward something most decidedly personal. His constant effort to solve modern problems,—especially the problem of the modern church,—in modern ways was often crowned with success because of his very active inventive faculties. The exercise of these faculties, prompted by a desire to create new architectural forms and compositions, shows itself in his earliest church designs, probably before he felt any serious need for a more modern expression of architecture on a large scale. Never having developed a strong attachment for any of the monuments of Gothic architecture through first-hand study (he made almost no trips to Europe for that purpose), his imagination had a freer opportunity to express itself in original ways. He could not be called a deep student of the principles or details of Gothic architecture, and yet his temperament was forever expressing itself in ways peculiarly Gothic in principle, and therefore fundamentally Gothic.

With the single exception of the new Liverpool Cathedral, he was little influenced by the work of any other architect, living or dead. Although he possessed a

good library, he made comparatively little use of it. He got his inspiration from within his own fertile mind, and found therein ample material to carry his work to its logical completion. The same might be said of his renderings in pen and ink, water color, lithographic, pencil or

what not,—or combination of all these,—he was seldom influenced by anyone. He used to confess to a strong desire in his early youth to imitate the masterly pen drawings of Herbert Railton, but if this was actually the case, there is little evidence of it in any of his work, either early or late.

Although Goodhue has long held a prominent place among renderers in pen and ink, this rather limited means of expression soon proved an insufficient outlet for his richly artistic nature, and we find him excelling in water color, and in combinations involving every medium under the sun,—anything to give him the result he strove for. Some of his best drawings are in mediums other than that in which his reputation was so early made. The two pencil drawings of the Peterson house at Brewster, N. Y., the Persian fantasy made for

Elmer Grey, and several sketches made on the margins and fly leaves of books stand out conspicuously as examples of these. Two other drawings in pen and ink after the manner of woodcuts deserve to be noted, not only because of their excellence, but as illustrations of the artist's versatility. One of these is a composite of many of his architectural works, among which we recognize the West Point Riding Hall, the California Building at San Diego, St. Thomas' Church and, crowning all, the unfinished cathedral at Baltimore. The singing swan in the shield might seem to signify that he regarded this as his final achievement! The other of the two drawings is a decorative composition based on the city plan of Baltimore in pseudo perspective, with the proposed cathedral looming, large and impressive, in the distance.

Toward the end of the volume are many illustrations of examples of sculpture produced under Mr. Goodhue's direction by Lee Lawrie, those for the Nebraska State Capitol being especially worthy of note. These are followed by a few specimens of bookplates, borders and decorative lettering, representing, however, but a fraction of Goodhue's work in this field. Taken as a whole, the volume is a worthy tribute to a great architect.

BERTRAM GROSVENOR GOODHUE, Architect and Master of Many Arts. Text and 273 Plates, 11 x 14 ins. Price \$30. Press of the American Institute of Architects, New York.



Parish House, St. Peter's Church, Morristown, N. J.
From "Bertram Grosvenor Goodhue, Architect
and Master of Many Arts"

BOOK DEPARTMENT

Some Ancient Bridges of Old France

A Review by WALTER D. BLAIR

WITH problems of transport man has been occupied from earliest time. Trade has flowed along the routes of easy gradients laid out by nature. Where these routes crossed, as at Bagdad and Damascus; or were checked by natural barriers that demanded additional preparation for traversal, as at Palmyra, great cities sprang into existence. Across impeding rivers, if the route was important enough and his means adequate, man built in the past bridges of enduring masonry. This volume contains records of some of those that were built in France from Roman days down through the eighteenth century, a long chronicle of artistic accomplishment. Of the 40 bridges shown, five are of Roman origin. All reveal a high order of beauty, resulting from pleasing relations of simple elements,—masonry masses, arches, and piers.

The bridge shows man's leap into space and his mastery of that element in a far more stirring manner than any dome or minaret has ever done. These great arches that have come through the centuries still sing the same triumphant song of spirit mastering matter. The Pont du Gard, the bridge at Albi, the Gothic bridge at Cahors, the Pont Neuf at Paris, the Pont St. Laurent at Chalon sur Saone, proclaim mind's mastery, some in bold, rude fashion, some graciously, some with an exquisite touch of delicacy. What could be more delightful than the little bridge of rusticated stone near Chalon, dating from the eighteenth century, which is formed of two semicircular arches of 20-foot diameter, with a central pier? Its buttress is semi-circular, with a projecting prow to break the force of the river's current, and is surmounted by a square urn of simple, rugged profile. A moulded cornice with modillions, of admirable profile, completes a design that is remarkably harmonious and satisfying.

These details are touched with imagination, for the buttresses, their silhouettes, their crowning features, the

balustrades and cornices are of amazing variety and effectiveness. Such a bridge, to take only one example, is that near Auxerre, which consists of two small elliptical arches of 26-foot span with a single central buttress, is a veritable gem of beauty, one of the treasures of France.

It is a pleasure to record that this book has in its chosen field the technical quality and artistic interest of

Letarouilly. Each bridge is presented in a series of line drawings, plan, sections, elevation, and details of admirable and precise draftsmanship. There are also given two pages of drawings which show all the bridges drawn to the same scale, and a tabulated list giving the location, name of river spanned, date, author, number of arches, width of arches, total length and width, and the height above water of each bridge. In addition there are photographic views, maps and diagrams, and 24 reproductions in color from original water colors by Pierre Vignal, superbly done, and 35 black and white drawings by Louis C. Rosenberg and Samuel Chamberlain. Was there ever so abundant a feast spread for architect, bridge engineer, or lover of simplicity in architectural beauty? And, as *hors d'œuvres*, since they come first, a preface by Victor

Leloux, a delightful introduction by the authors, and a bibliography. The text is admirably written, and gives in an interesting way the history of each of the bridges.

It is safe to say that no publication of so great architectural merit and usefulness has appeared for years. It will become a standard work of reference in every library. In conclusion, mention must be made of the excellent typography, and praise awarded for its artistry.

OLD BRIDGES OF FRANCE. By William Emerson and Georges Gromort. Portfolio. Preface by M. Victor Laloux; 24 reproductions from black and white drawings by Louis C. Rosenberg and Samuel Chamberlain; 44 measured drawings, diagrams, maps, and reproductions of photographs. 12½ x 17¼ ins. Price \$25. Press of the American Institute of Architects, 250 West Fifty-seventh Street, New York.



The Pont Neuf, Paris
An illustration from "Old Bridges of France"

Bertram Grosvenor Goodhue

Architect and Master of Many Arts

PERHAPS no architect who ever lived in America built up more of a personal following than Bertram G. Goodhue. His was one of the two or three names which came instantly to mind when Gothic ecclesiastical architecture was mentioned, and his churches, many and prominent, have exerted their influence upon ecclesiastical architecture all over the world. But Mr. Goodhue was equally talented in other and quite different ways. He well knew how to handle architecture of entirely other kinds, and his drawings, book plates, illustrations and type faces were of such note that they all but compete with his work, as an architect of Gothic churches.



THIS volume constitutes a record or review of Mr. Goodhue's achievements in many fields. Those who collaborated or worked with him have contributed to its text, and its illustrations set forth the excellence of his work in all the arts of which he was an acknowledged master. It is a magnificent and authoritative work, issued by the Press of the American Institute of Architects.

Text and 273 Plates, 11 x 14 inches

Price, \$30

ROGERS & MANSON COMPANY
383 MADISON AVENUE NEW YORK

A HISTORY OF ARCHITECTURE. By Sir Banister Fletcher. Seventh Edition. 933 pp. 6 x 9½ ins. Price \$12 Net. Charles Scribner's Sons, New York.

APPEARING now in its seventh edition, this excellent history of architecture is far too widely known to require an extended review. Sir Banister Fletcher occupies a high rank among the most eminent British architects, a tireless traveler, deep student, the recipient of countless honors, and a member of many learned societies, and his work is the result of abundant learning and erudition, as well as of wide experience.

One is often asked to suggest to some aspiring beginner a work dealing with architecture. As a rule it is wise to recommend for his reading some volume which explains what architecture really is, its relation to life, giving as well some brief outline of the forms which architecture has assumed at different times and in various countries. Sometimes, however, the beginner's interest leads him further afield, and the call is then for a work of wider scope, a *history* of architecture, which instead of skimming over the surface and dealing largely with generalities goes deeply and intimately into the subject,—and for such an one it would be scarcely possible to suggest a volume more valuable and helpful than the work now under review. It is complete in every detail.

For the present edition the text has been both revised and added to, while to cover the subject with the completeness which it deserves there have been included more than 3,500 illustrations, full-page or half-page halftones in many instances, of the most important examples of architecture in the world, and line cuts of many others, with countless cuts of details, plans, sections, profiles, elevations and the like, these minor cuts being accompanied by scales by which measurements may be easily made. To add to the great helpfulness of the work there is appended to each chapter a full bibliography or "list of reference books," with the aid of which the student may continue the study of architecture as far as his inclination may lead him. Nothing of interest is overlooked.

The complete title of this work is "A History of Architecture On the Comparative Method," and its aim is "to display clearly and briefly the characteristic features of the architecture of each country; and also to consider the special influences which have contributed to the formation of each style; for hitherto geography, geology, climate, religion and social and historical development have not been sufficiently considered in dealing with architecture.

"In order to bring out the effects of these influences, a method both *analytical* and *comparative* has been adopted, to elicit the special qualities of a style, and to contrast them, so that differences may easily be grasped, and individual styles better understood. For instance, the character of Gothic architecture is emphasized by comparison with the Classic and Renaissance styles; while shades of difference in local or national phases can be best appreciated by similar treatment.

"Each style, then is *analytically* examined under five headings, and thus the influences, character, examples and analysis of each style can be contrasted with those of any other style in this *comparative* method. In some sections the analysis of two styles is set out in parallel columns, a system which has proved very helpful to students." The work is indeed one of the best imaginable.

EIGHT PERIODS AND THEIR MODERN ADAPTATION.
Third Edition. Issued for Architects and Interior Decorators
by the Murphy Varnish Co., Newark.

TO promote the correct use of its various materials, the Murphy Varnish Co. issued in 1923 the publication "Eight Periods and Their Modern Adaptation," presenting a review of the historic periods of decoration which are being most followed by architects and interior decorators. The work supplied for each of the periods a brief historical review; illustrations and careful analyses of old rooms of these periods and of rooms recently designed; illustrations of the furniture and accessories which belong to them; a "characteristic chart," giving suggestions for the treatment of ceilings, walls, floors and other parts of structural background, and suggestions also for the arrangement of furnishings, draperies and other fittings used to enhance the architectural and decorative value of the interior; complete directions for using the stains, varnishes and other products of the Murphy Varnish Co. in securing these finishes. The practical value of the brochure is attested by the fact that almost 5000 architects and a vast number of interior decorators have asked for and received copies since the original edition was issued, two years ago.

Widespread and deepened interest in the early Spanish type of architecture and interior decoration made it apparent some time ago that this work should have included a discussion of the early Spanish to make it as helpful to architects and decorators as the Murphy Varnish Co. desired, and in preparing the third edition of "Eight Periods and Their Modern Adaptation" there has been added a section on this particular type. This new section presents illustrations and descriptions of rooms old and rooms recent; two pages of illustrations of accessories,—furniture, pottery, metal work, etc.,—of Spanish origin; suggestions for the treatment of interior architecture and the arrangement of furnishings, and directions for using the different materials supplied by the Murphy Varnish Co. for securing the decorative effects on ceilings, walls, floors and woodwork which are so vitally important to the correct interpretation of this distinguished but frequently misunderstood architectural type. Much of its character depends upon details.

"Eight Periods and Their Modern Adaptation" may be had by architects and interior decorators of the Murphy Varnish Co., Newark, and for those who have received copies of the earlier editions the Spanish section has been issued separately, under the title of "Spanish Interiors and Their Modern Adaptation."

STANDARDIZED METHODS FOR COÖPERATIVE BUILDINGS; Organizing, Selling and Operating Coöperative Apartment Buildings. Price \$20. Issued by The Coöperative Apartment Association of Chicago.

LIKE many another innovation or new departure in building or real estate ownership, the matter of the "coöperatively owned apartment house" has had to go through a preliminary stage in which experiment has led to an understanding of the problem and an appreciation of the pitfalls which, unless wisely managed, it may present, and finally to a point where, during many years, complete and entire success has been achieved. The project of a coöperatively owned apartment house involves much the same consideration which

should be applied to any other project in which a number of people unite to achieve some definite, specific end, sometimes referred to as "group ownership." In such an instance it includes (1) purchase of a suitable building plot; (2) erection of an appropriate building; (3) such control or management of the enterprise that the investment of each of the parties concerned is safeguarded, and that each derives the benefits which come of participation in an operation which is coöperatively managed. Each of these problems demands study.

It has now been many years since coöperative ownership of a residence structure was first attempted in America. Because the methods by which success in such a field was to be attained were not sufficiently understood, the early projects met with difficulty if not with disaster. But the matter was given the careful study of minds well trained by dealing with problems more or less similar, and with full and complete understanding of the problem there have been worked out means or methods which years ago definitely assured success to those who would profit by the lessons which experience has taught to those who would learn.

The success which coöperative ownership of residence structures has now attained, not only in New York but in countless other cities and towns, together with the need of some medium whereby the matter could be easily explained and the correct methods studied, has resulted in the publication of this valuable work. Men fully experienced in the details of group ownership here explain its workings; anyone interested may here learn how to go about forming a group of tenant-owners, and to make the matter abundantly plain there are included in the work even the actual legal blanks or forms by which the necessary contracts may be made and other details connected with coöperative ownership put through. The work gives what is (as far as is known) the only complete and authoritative advice as yet obtainable on a subject of growing interest.

THE MONUMENTS OF CHRISTIAN ROME. By A. L. Frothingham. 412 pp. 5 x 7½ ins. Price \$3. The Macmillan Co., New York.

WHATEVER be his interests, the visitor to Rome arrives to find sources of interest which are overwhelming by reason of their number. Rome is so ancient and has been the world's center for so long that she has gathered to herself treasures archæological and artistic, and legend and romance in such abundance that those possessed by any other city pale almost into insignificance, when compared to Rome's inexhaustible store.

Mr. Frothingham's excellent work concerns itself with art and the architecture of Christian Rome, which originated in the most humble of ways in the Catacombs, but which emerged, vigorous and triumphant, during the reign of Constantine, to adapt ancient basilicas to use as churches, and to plunder venerable temples to embellish the new fanes which presently began to arise. The book is written from a point of view which is considerably different from that from which most works on Rome and Roman antiquities are prepared, and the author has succeeded in adding interest to the volume by including illustrations and descriptions of places and objects little known even to residents in Rome, and totally unknown to most visitors who explore the resources of the city.

The Ancient Missions of the Southwest

A Review by WALTER F. WHEELER

WHAT is left of the Missions in the southern portion of California and in certain sections of Arizona, Texas and New Mexico represents an architectural type which is wholly different from anything which was to have been found elsewhere in America during the early days of this country's history. The New England states and most of those along the Atlantic seaboard were settled by the English of several different types, and presently their architecture began to be developed along lines more or less English; New York, which was first Dutch and then English, exhibited forms reminiscent of the architecture of both countries. In Florida and Louisiana Spanish and French influences were strong, but in neither did building figure as prominently as it did elsewhere, and produced little in the way of structures which were highly important. Thus it will be seen that of those early buildings which could have been regarded as in any way notable, the greater part were of types unmistakably English in form and spirit.

To all of this the Missions present a striking contrast. The early settlement of the Southwest was by the Spanish, and the conquerors fully appreciated the importance of the civilizing influence of the friars, who carried the cross alongside the sword. Large powers, temporal as well as spiritual, were given to these ecclesiastics,—religious as a rule, and for the most part Franciscans, with some Dominicans and Jesuits,—and their influence dominated the region. Theirs was a gentle rule, the iron hand being dexterously concealed within the velvet glove. Of this rule the Mission buildings formed the sign or symbol of power both secular and spiritual. The friars, since they possessed little of this world's wealth and were unable to summon into their beautiful wilderness the expert architects, builders and engineers who were performing wonders in Mexico, relied perforce upon themselves and upon such of their Indian wards as could be trained as artisans in the simpler building trades. Their Mission buildings were for the most part of adobe coated over with stucco, and with wide roof overhangs designed to prevent the penetration of dampness behind the stucco to loosen it from its backing. In style they represented the simplest possible version of the Spanish Renaissance, exhibiting all the

abrupt contrasts of which the Spanish architectural styles make such effective use, sometimes, it is true, when some particularly auspicious circumstance made it possible, indulging in some simple and rather tentative use of the Baroque forms which were popular in Mexico and Spain, the detail usually taking the form of an unusual window opening, some striking design of a pediment, gable or belfry, or else (upon occasions rare indeed) involving some rather primitive use of modeling. The plan was based upon that used in Spain and Mexico for secular as well as ecclesiastical structures, buildings enclosing a courtyard or *patio*, the church being the largest structure, with a narrow nave, made necessary by the shortness of the timbers used for trusses over the areas between heavy adobe walls. Such were the Missions.

Excepting for its exterior nothing could have been simpler than the Mission's appearance within, though here again the bold use of effective contrasts sometimes saved it from absolute bleakness; sometimes too there would be seen evidences contributed possibly a scholarly, cultivated taste, evidences contributed possibly by some visitor or by a friar who had seen something similar in Mexico or in Spain. The Missions ruled the region, subduing the Indians and leading them in the paths of peace,



A View at St. Bonaventura's
From "Old Missions and Houses of California"

until the Missions themselves were secularized by the Mexican government during the second quarter of the nineteenth century. Secularization spelled the ruin of the Missions, and ruin was quickly followed by physical decay in all but the few instances (such as that at Santa Barbara) where the Missions have never been abandoned. Some of these venerable structures have been restored, not only structurally but also to the uses for which they were built. Restoration of others will follow.

The wide interest in Spanish architecture, together with the adaptability of the forms used in ecclesiastical building, renders this work of considerable architectural interest. Mr. Newcomb writes of the Missions in a way which clothes the subject with something like the garb of romance. Not only the Missions, either, for a part of the work deals with some of the old residences which also belong to the period which the Missions represent. **OLD MISSION CHURCHES AND HISTORIC HOUSES OF CALIFORNIA.** By Rexford Newcomb. 379 pp., 7½ x 11 ins. Price \$15. J. B. Lippincott Company, Philadelphia.

THE EDITOR'S FORUM

ARCHITECTS ORGANIZE

A NEW factor has recently entered the architectural field in Washington. It is known as "The Allied Architects of Washington, D. C., Incorporated," and it includes the majority of the established Washington architects, all of whom are members of the American Institute of Architects. The special feature of the corporate service is consultation and collaboration and compilation of schemes among men of the highest caliber and widest experience. The arrangement makes it possible for younger men of marked ability in design to obtain for their ideas full consideration, together with the safeguard which comes from the supervision or support of men long in practice.

The organizers announce that it is not the intention of the corporation to enter the field of ordinary private practice, and that it will concern itself only with larger public or semi-public undertakings. The first of these is the new House Office Building of the House of Representatives, for the preliminary plans of which a contract has recently been signed with the Architect of the Capitol.

The Washington organization is modeled closely on that of the Allied Architects Association of Los Angeles, which now has a membership of over 70; and handles practically all of the public work of that city. The detailed handling of its projects has gained great popularity for the Los Angeles group, and has aroused much interest in the architectural profession generally. The President of the association, Edwin Bergstrom, came to Washington recently to advise the directors of the new corporation.

INDUSTRIAL HOUSING

PUBLICATION has been made of the address delivered by Andrew J. Thomas of New York before the recent conference at Colorado Springs of the National Association of Building Owners and Managers, in which he presented an encouraging outlook for the improvement in homes intended for industrial workers. There has also been issued, in booklet form, a reprint of several articles contributed by Mr. Thomas to the New York *Evening World*, entitled "Garden Apartments to Replace Slums," the booklet being replete with plans and diagrams showing the economical arrangement of buildings on city blocks which at the same time would make possible interior gardens and other open areas.

Mr. Thomas presents figures to prove that while giving to the owning company a fair return on the necessarily large investment, such living quarters could be had by the tenant at a monthly cost of \$10 per room, all rooms having air and sunshine, and all apartments being supplied with heat and baths:

CHARLES F. MCKIM LETTERS

A VOLUME of the letters of the late Charles Follen McKim is being prepared for publication, under the editorial supervision of Charles Moore, Chairman of the National Commission of Fine Arts. Those having letters from Mr. McKim are earnestly requested to allow them to be copied, the originals to be returned promptly. Such letters may be sent to Mr. McKim's daughter, Mrs. William J. Maloney, 145 E. Fifty-second St., New York.

AWARD FOR CARNEGIE STUDENT

ONE more honor for the Department of Architecture of Carnegie Institute of Technology is indicated in the announcement that a traveling scholarship of \$500 to the Fontainebleau School of Fine Arts has been awarded by the Beaux Arts Institute of Design to Luther S. Lashmit, a graduate and instructor of the Pittsburgh institution.

The scholarship, it is announced, is for three months' study this summer at Fontainebleau. The award was based on work submitted in the last Class A judgment of the year, Lashmit, with Wayne F. Koppes, a senior at Carnegie, and George N. Pauly, a graduate of Carnegie, winning the first medals.

THE ROOSEVELT MEMORIAL

ACCORDING to an announcement made recently, John Russell Pope has been selected as architect of the Theodore Roosevelt Memorial in Manhattan Square, by the Trustees of the New York State Roosevelt Memorial Association. Mr. Pope was chosen in a competition in which the plans of eight firms of architects were considered.

The jury that passed on the designs included Henry Fairfield Osborn, Chairman of the Board of Trustees; Peter D. Kiernan, Albany; Mrs. Douglas R. Robinson, New York; Chauncey J. Hamlin, Buffalo; Charles W. Flint, Chancellor of Syracuse University; Mrs. William H. Good, Brooklyn, and William Richard Kendall and Milton B. Medary, Jr.

PRIX DE ROME WINNERS

IT has recently been announced that Michael Joseph Mueller of the Yale School of Fine Arts, and Walter Hancock of Chestnut Hill, Pa., are the winners, respectively, of the first prizes in painting and sculpture awarded for this year by the American Academy in Rome. Each of these prizes carries the fellowship known as the Prix de Rome, entitling the holder to three years' residence and study at the Academy in Rome, and a stipend of \$1,250.

The fellowship in sculpture is provided by the Jacob H. Lazarus Fund of the Metropolitan Museum of Art. The fellowship in painting is donated by Samuel L. Parrish, of Southampton, N. Y.



*Telesco Partition
standard units and
posts slip easily
into position.*



*A few screws hold
them securely in place.
Extension top fits to
any ceiling height.*

What's the Use of Experience Unless You Use It?

MEN who have gone through the changing of office layouts know what it means. If the walls are plaster there will be weeks of dirt and dust and delays, to say nothing of the loss in money and time.

Even nailed together wood and glass partition has to be butchered and bungled every time it is moved. What's the use of experience unless you use it?

Telesco Partition is erected with screws and can be moved by a carpenter in a fraction of the time and none of the loss that comes with ordinary wood or plaster partition.

Send for complete details.

Telesco Union Label is insurance against troubles.

Telesco Partition
REG. U.S. PAT. OFF.
IT TELESCOPES

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

THE EDITOR'S FORUM

SUCCESS OF METROPOLITAN APARTMENTS

THE Metropolitan Life Insurance Company's experiment in Queens County of constructing and maintaining apartment houses at a rental of \$9 a room has brought a net return of 9.251 per cent during the first year of operation, the Company declared in a statement issued recently. Fifty-four apartment dwellings were built, involving an expenditure of \$7,363,168 and providing home accommodations to 2,125 families. The building operation was entered into to relieve the post-war congestion in housing, under an amendment to the insurance laws enacted by the New York legislature in 1922 in order to make such a venture possible.

No allowances were made by the Company on its estimates for loss of rentals and vacancies, which is usual with real estate operators. It was figured by the insurance officials that the low rentals would practically eliminate this item. That this assumption was correct was shown by the fact that only \$406 was lost through this cause, a percentage almost negligible.

SIXTEENTH CENTURY GLASS

RALPH ADAMS CRAM contributes a foreword to a brochure illustrating and describing the fine windows of Flemish glass recently installed in the Park Avenue Baptist Church, New York. The glass, essentially Renaissance in character, comes apparently from that part of Flanders lying between Bruges and Antwerp, and inasmuch as all the 16 panels are of the same size, uniform in scale, and deal with one subject (the Life of Our Lord) it is evident that they were made by one craftsman for use in one place.

Excellent illustrations in half-tone aid the student of old glass in forming a correct appreciation of the windows, which are fully deserving of careful study.

STRUCTURAL SOCIETY FORMED

AN organization known as the Structural Society of New York has been formed, whose members are directly connected with different branches of the building business, such as architects, engineers, draftsmen, contractors, estimators, structural superintendents, etc. The Society would be pleased to receive catalogs and publications of interest for its library. The secretary is Sidney Kitzler, 112 Haven Avenue, New York, to whom communications are addressed and to whom contributions are sent.

THE HARDING MEMORIAL AWARD

ACCEPTANCE has been made of the designs and plans by Henry Hornbostel and Eric Fisher Wood, of Pittsburgh, for the Harding Memorial, to be erected at Marion, Ohio, to the memory of the late President. The designs of the four architectural firms invited to compete were on exhibition during the third week of July at the Grand Central Galleries, New York, where the beautiful rendering of the designs submitted by John Russell Pope was greatly admired.

MEDALS FOR YOUNG ARCHITECTS

SIXTEEN students in as many colleges have been awarded the 1925 school medal for excellence in architecture by the American Institute of Architects. The winners were nominated by their college faculties and were presented with copies of Henry Adams' book, "Mont St. Michel and Chartres," and the silver medals on which were inscribed their names.

This year's winners are Stuart M. Shaw, Columbia; Roy E. Vickers, Ohio State; Arnold R. Southwell, Oregon University; W. Dexter Edgerton, Syracuse; Richard J. Pearce, University of Washington at Seattle; Alvin E. Rigg, Minnesota; Willis J. McCauley, Armour Institute; Homer Fay Pfeiffer, Illinois; Gilbert Geery, University of Kansas; Norman K. Blanchard, University of California; Norman L. Roberts, Kansas State Agricultural College; Wayne F. Koppes, Carnegie Institute; Frederic Faris, Cornell; Harold Theodore Spitznagel, University of Pennsylvania; Walter Herbert Schilling, Yale, and Roger P. Moore, of the Massachusetts Institute of Technology.

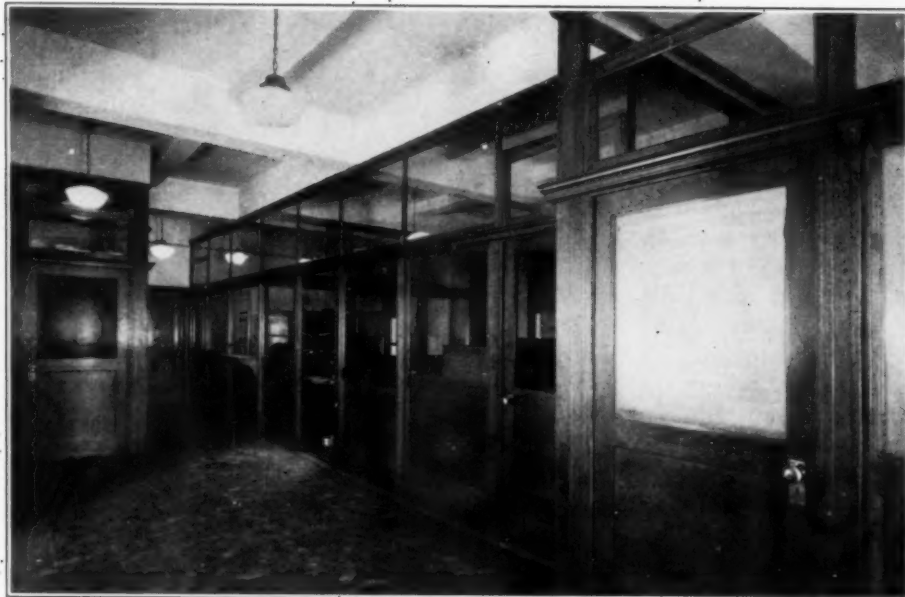
AN OMISSION

BY an oversight the name of C. Godfrey Poggi, of Elizabeth, N. J., was omitted from the illustrations and plans of the Elizabeth *Daily Journal* Building published in the July FORUM. Of this structure Hollingsworth & Bragdon and Mr. Poggi were the associated architects and should receive credit.

COOLING SYSTEMS

THE American Society of Refrigerating Engineers, 154 Nassau St., New York has published a reprint of an address on "Cooling Systems of Buildings" delivered at a meeting of the society by A. M. Feldman, Consulting Engineer. The address deals with the practical value of such equipment, and discusses the working of cooling apparatus in hospitals, residences, and buildings of other kinds.

Telesco Partition
REG. U.S. PAT. OFF.
 IT · TELESCOPES



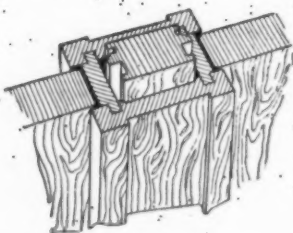
A Movable Partition That Can Really Be Moved

MOVABLE, easily movable, movable by any carpenter in a few hours' time with no tool but a screwdriver. That is Telesco Partition.

Beautiful and staunch as a rock, it is an addition to any office. Yet when changed conditions demand a new partition layout, Telesco Partition will accommodate itself readily.

The standard parts are interchangeable and erected only with screws. The extension top, an exclusive Telesco feature, insures its reaching any ceiling height without alteration to the partition.

Write us for complete details.



This cross section view of the hollow Telesco post shows plainly how the extension member is housed. Notice the strength of the post construction. You can also see the grooves that hold the partition sections in place without their having to be nailed.

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

THE EDITOR'S FORUM

BELATED RECOGNITION

A STRIKING instance of the ingratitude for which republics are said to be well known is found in our country's treatment of Pierre Charles L'Enfant, and in its sadly belated recognition of the debt which the nation owes to his genius. Upon a wide, spreading marsh on the banks of the shallow Potomac, L'Enfant laid out the city which from the beginning was destined to be the national capital. Thwarted at every turn by those in authority, from whose interference even the great influence of George Washington could not protect him, and destined to see many of his most cherished plans frustrated by the greed and cupidity of real estate speculators, for whom Washington has always been a kind of happy hunting ground, he persevered and finally succeeded in laying out, obviously upon French models, the only definite plan ever made for an American city, a plan which has always been adhered to in the main, and to which is due a large part of whatever distinction and beauty Washington may be thought to possess at the present time.

Cheated at every turn, and victimized by a Congress more than ordinarily pusillanimous, niggardly and shortsighted, L'Enfant died in obscurity, and was buried upon the private estate of the benefactors who had prevented his seeking the shelter in the public almshouse to which his dire poverty entitled him. More than a century later the work of this gifted French architect and engineer has received the recognition which should have been bestowed by a more enlightened age; L'Enfant's remains (or rather what are thought to be his remains), after reposing for one hundred years in an unmarked grave, have been rescued from oblivion and neglect, and it is pleasant to be able to record that his bones have lately been re-interred at Arlington, near the front of the historic Lee mansion, overlooking the city whose foundations he himself laid. Members of Congress have at last joined the large company of those who believe, with Richelieu, that "great designs are to be judged only by their success," and in the eulogies which this recognition has called forth there may be some slight return for neglect.

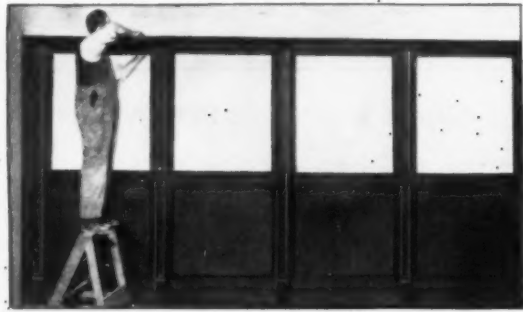


The Tomb of Major Pierre Charles L'Enfant,
Arlington National Cemetery
Welles Bosworth, Architect

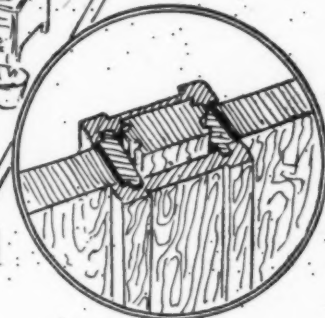
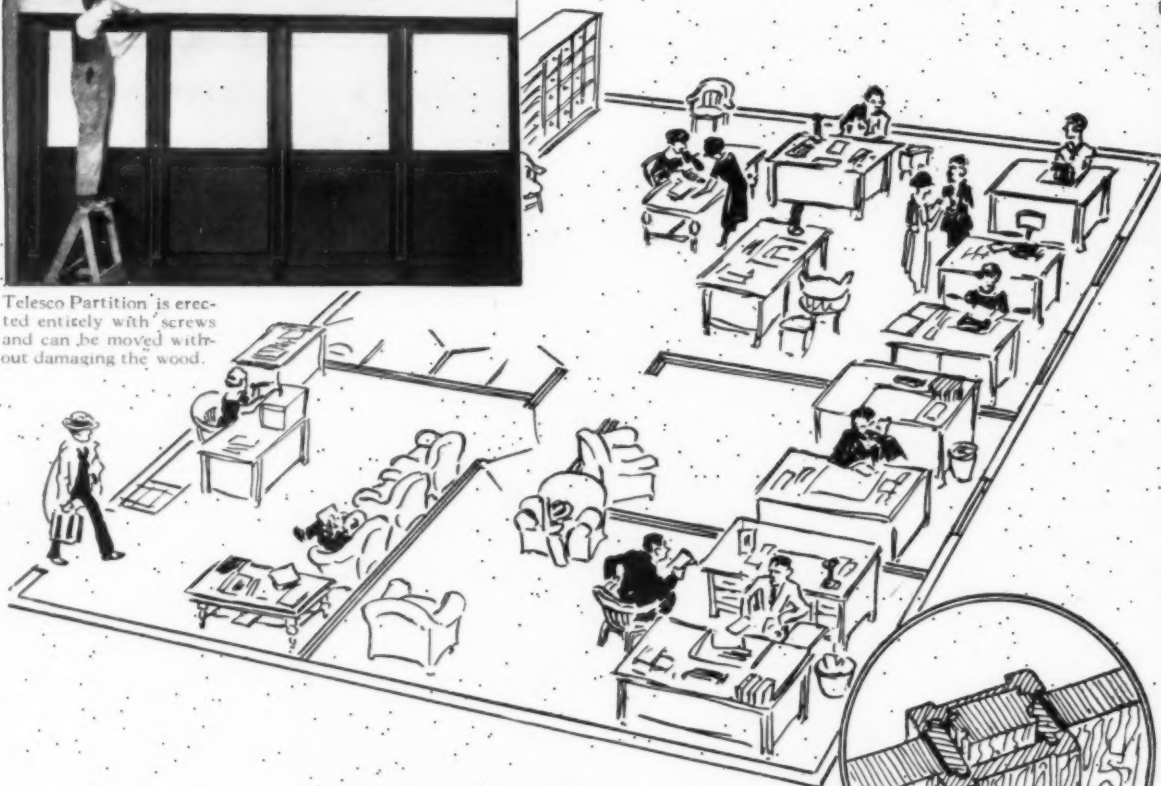
LUMBER STANDARDIZATION

THIS is preëminently the day of standardization, particularly, it would seem, with whatever has to do with building or engineering, and thrift and economy are well served by such organization. The lumber interests of the United States have for years felt the need of standardization and grading of lumber. This need is apparently about to be met for at least a part of the country, and in Chicago on September 29 there is to be held a meeting of those who supply and those who use lumber, with a view to effecting such a method of standardization as has been already urged by Secretary of Commerce Hoover and the National Standardization Conference, and such as has been already put into effect and found successful by the Southern Pine Association:

The proposal for the meeting of the city's building interests was first taken up with the Chicago Retail Lumber Dealers' Association, which considered the matter as one which should properly be handled by the Chicago Lumber Practice Committee, of which L. L. Barth is chairman, and to whom the project was referred. This committee consists of three retail lumber dealers,—Mr. Barth, W. S. Frisby and J. J. Chalmers; two representatives of the Chicago Chapter, American Institute of Architects,—F. E. Davidson and Emery Stanford Hall; two from the Illinois Society of Architects,—Joseph G. Llewellyn and Harry B. Wheelock, and two from the Illinois District, American Society of Civil Engineers,—James W. Perl and J. H. Prior. Members of this committee held a conference with representatives of the Southern Pine Association, which, as the first organization of lumber manufacturers to put the standardization and grade-marking program into effect, is assisting the lumber and building interests in the principal centers east of the Rocky Mountains in establishing the movement in their respective communities. The numerous and varied lumber and building industries of Chicago, which is noted as the largest lumber market in the world, are expected to take a leading part in promoting the use of thoroughly standardized and grade-marked lumber, with great resulting benefit to building.



Telesco Partition is erected entirely with screws and can be moved without damaging the wood.



Cross section view showing the extension post that raises or lowers to make Telesco Partition fit to any ceiling height.

Saving Rent In The Hub Of The World "The Grand Central Zone"

MOST of the large new buildings in the Grand Central Zone, New York City, are equipped with Movable Telesco Partitions.

There are good reasons for this. Here are three:

1. Architects and owners find it impossible to forecast the requirements of tenants. Over-night Telesco Partition can be erected to make any desired layout.
2. Building managers find the economies over non-movable wood or plaster partition make an important difference in the rents they must charge.
3. Tenants request the lasting beauty and the staunchness of Telesco Partition to match their other office equipment.

For architect, owner and tenant there are savings in movable Telesco Partition, found in no other sub-dividing material. Our catalogue tells of them. Send for a copy.

Telesco Partition
REG. U.S. PAT. OFF.
IT TELESCOPES

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

THE EDITOR'S FORUM

ARLINGTON HOUSE

NO one will grudge the money which the War Department proposes to spend for repair and renovation of the Lee mansion at Arlington. It deserves to be cherished as carefully as Mount Vernon. With the latter, in fact, its history is closely connected, tradition declaring that Washington often visited the site before his adopted son, George W. P. Custis, built the present house. As heir to Martha Washington, Custis became the custodian of many Washington relics, which he installed in Arlington House. Upon his death they passed into the hands of his daughter, Mary, the wife of Robert E. Lee, the last of its private owners.

Aside from these personal associations of the Lee house, it is encouraging to see steps taken to preserve a spot made famous in American history. The last few years have seen a new awakening of interest in places of national and local historic importance. The campaign for the preservation of Jefferson's home, Monticello, is hardly yet completed. There has been a recent move to make a public museum of The Grange; Hamilton's house in uptown New York. New York state has been trying to mark historic highways and to commemorate famous battle sites by erecting monuments. Last year Philadelphia was concerned about the possible destruction of Franklin's early home in that city. Here in New York a campaign to save and move Monroe's house has lately met with gratifying success. The intention in each case has been the same,—to preserve for future generations places intimately associated with the history of the United States. Of these Arlington House stands out among the most beautiful, interesting and architecturally important.

OLD ROOMS TO BE EXHIBITED

THE management of the Museum of Fine Arts, Boston, announces the approaching installation in its new wing of part of the Museum's rich store of treasures of old American interior woodwork, furniture, and other objects. For many years, as occasion and accumulation of funds have made it possible, the Museum has been adding to its excellent collection of paneling and other woodwork from old New England buildings. Certain entire rooms, with their walls and woodwork, are now to be assembled or rebuilt, and furnished in the manner of their respective periods as an object lesson to present-day architects and interior decorators.

While this department will be a worthy rival of the now famous "American Wing" at the Metropolitan, there will be many points of difference. A new departure in the Boston Museum will be that the exhibits will not be confined entirely to the

rooms, but adjoining each room there will be a gallery containing many other objects of the period. Freedom of movement will be one of the special aims in constructing this new wing. To obviate the crowding of visitors, passage will be directly through the rooms, and there will be nothing of the "alcove" effect that has been adopted in some other museums.

Important among the American rooms will be three from the Derby-Rogers house at Peabody, Mass., which in its prime was one of the finest examples of the architecture and furnishing of the early Federal period in America, Samuel McIntyre being the architect. It was completed in 1801 for Elizabeth Derby, the eldest daughter of Elias Haskell Derby, a merchant of Salem. Other interesting objects which will be restored in the new wing are interior fittings from the Jaffrey house in Portsmouth, N. H., built in 1730, the earliest eighteenth century house constructed of wood in Portsmouth, dating ten years later than the famous Warner house, built of brick, said to have been imported.

This house was an early example of the Georgian manor, and there were fine paneling and a handsome stairway. The house was built by George Jaffrey, Jr., who was graduated from Harvard in 1702.

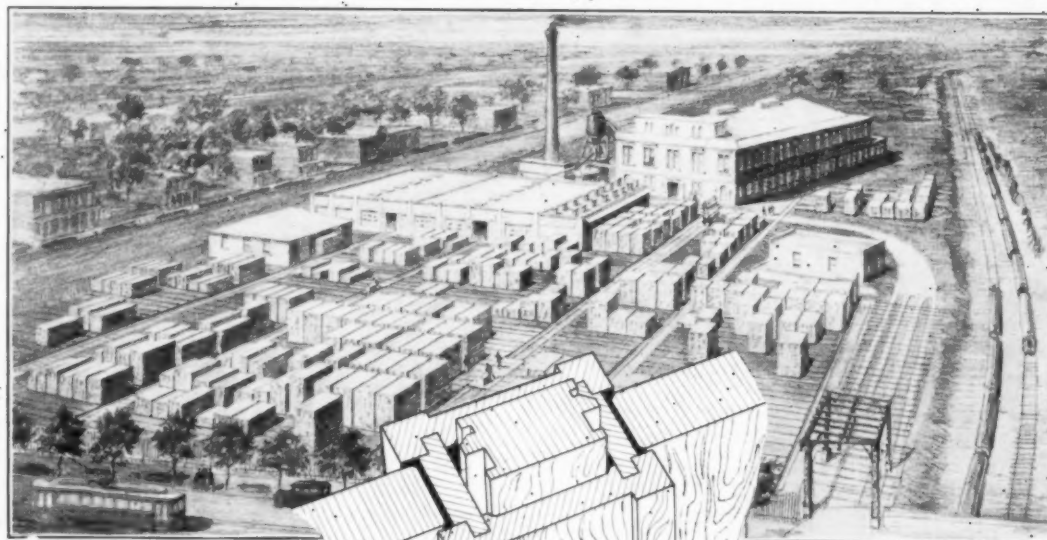
PLANNING THE CHURCH

WITH a view to offering guidance in the designing and planning of places of worship, the Methodist Board of Home Missions and Church Extension, 1701 Arch Street, Philadelphia, issues a brochure entitled "Building the Seven-Day-A-Week Church." It is not precisely a book of recommended church plans, since every building problem should receive special study; it is rather a presentation, in brief form, of suggestions for those concerned with the planning of new church buildings or the alteration of existing structures, the illustrations and plans merely indicating the means by which certain problems, each involving different circumstances and limitations, were solved and difficulties removed.

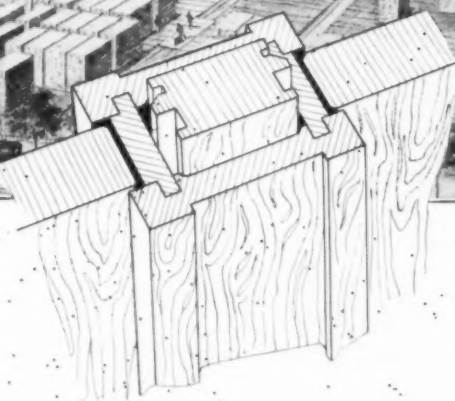
The brochure makes due and full recognition of the claims of architecture, and a wide distribution of the publication would without doubt arouse interest in architecture in fields where its importance is frequently overlooked. A complete bibliography adds to the usefulness and flexibility of the publication.

ERRATUM

WE regret to find that the name of Robert M. Allen was omitted from the pages of the August number of THE ARCHITECTURAL FORUM illustrating the Roanoke Country Club. Smither & Tardy and Mr. Allen were associated in the designing of the club, and joint credit should be given them.



Telesco plant and yards, Elmhurst, N. Y. Over 2,000,000 feet lumber storage. Most modern kilns and machines in the country.



A Tale Of The Post That Built The Mill That Builds The Posts That No One Else Can Make

ONLY in Telesco Sectional wood and glass partition will you find Telesco hollow post construction. It not only has revolutionized the partition industry but its success has built the largest and most modern office partition plant in the world.

Telesco hollow posts take the place of the usual pilaster nailed over the section joints. They are constructed to be screwed to the floor, the sections being held in place by the grooves as shown in the detail.

Inside the post is the extension member that can instantly be extended or contracted to make the normal seven foot partition reach to any ceiling height.

This firm, staunch, instantly movable partition is used in hundreds of office buildings all over the country. We will gladly send you complete details. Write for them.

Standard Telesco hollow division post with section cut away to show extension member housed inside and partially extended above.

Telesco Partition
REG. U.S. PAT. OFF.
IT TELESCOPES

Standard hollow post with extension member showing but a few inches. This 7' post can be extended to reach a 14' ceiling, or even higher.

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

THE EDITOR'S FORUM

GIBBON'S CARVINGS AT ST. PAUL'S

REPAIRS now in progress at St. Paul's Cathedral have involved the taking apart of the organ case, and according to *The Times*, the matchless carving by Grinling Gibbon is now to be seen at close range for the first time since 1870, when the organ, which was originally placed upon the screen between nave and choir and later was set within the central arch of the choir upon the north side, was divided and placed in its familiar position.

"To all appearances, the wood is in perfect preservation, the carving of the Corinthian capitals being as sharp and clear as when it was done. For the body of the casing and the figures of cherubs and angels oak was used, the swags of fruit and foliage for which Gibbon was specially famed being in limewood, which cuts easily in any direction. Gibbon's original idea seems to have been to make manifest the music proceeding from the organ; most, if not all, of his angels have stayed their trumpets to listen, his cherubs are moving and smiling, and fruit and foliage complete the festival feeling. Inset in the panels which screen the organ chamber there are grilles of gilded metal, and these are probably the work of Tijou, another of Wren's famous craftsmen, from whose designs the choir gates were made of the last iron obtained from the Sussex iron fields."

PASSING OF ADELPHI TERRACE

THAT London, as well as New York, suffers from the ruthless march of progress is proved by the announcement that the Royal Adelphi Terrace, as it is named officially, one of the best known works of Robert and James Adam, is to be destroyed to make room for a new building. On "the finest sweep of the curving Thames in all London," according to *The Boston Evening Transcript*, "there is to rise one of those enormous structures that tend more and more to Americanize Europe and destroy its beauty."

PETER BONNETT WIGHT

THE Chicago Chapter of the American Institute of Architects recently passed resolutions recognizing the loss which the Chapter has sustained in the death of Peter Bonnett Wight, which occurred on September 8, 1925 at Pasadena. He had reached the advanced age of 87. "Mr. Wight, student of art and life, builder and designer, was early a Fellow and for many years a Secretary of the Institute. His contributions to professional literature were many, varied and instructive. His history of the Chicago Chapter of the A. I. A. teems with interest and will long keep his memory green in the hearts of its members; his friends to whom, as to all, he gave himself without stint and in full measure."

PUBLICATION OF DRAWINGS

A NUMBER of English architects are interested in a movement to secure the publication of some of the rarely beautiful sketches and drawings made by Mr. Raffles Davison. Many of these drawings have been exhibited in New York and during the present year in London, but it has been thought that their collection and publication in permanent form would be of value. Among those identified with the movement are J. Alfred Gotch, President of the Royal Institute of British Architects, E. Guy Dawber, Sir Reginald Blomfield, Sir Aston Webb and Sir Edwin L. Lutyens, while the actual publication of the drawings is in the hands of Herbert Wigglesworth, 7 John Street, Bedford Row, London, W., to whom inquiries may be sent.

THE TOKIO EMBASSY

PLANS for the new American embassy building in Tokio, to cost \$1,250,000, will be drawn by H. Van Buren Magonigle, of New York, and Antonin Raymond, an American who has practiced his profession in Japan for the last six years. Announcement of the award of the contract for the drawings and specifications of the establishment, which will house the American diplomatic and consular representatives in Japan, was made by Secretary Kellogg. An appropriation for the structure to replace that destroyed by the Japanese earthquake was authorized by the last Congress, which was lately adjourned.

Mr. Magonigle, who will visit the site selected for the buildings before final decision on the plans and specifications is reached, is a Fellow of the American Institute of Architects. He designed the McKinley National Memorial at Canton, O.; the National Maine Monument, New York; Liberty Memorial, Kansas City; and many private residences, clubs, schools and other buildings. He is a past president of the Association of Alumni of the American Academy at Rome and of the Architectural League of New York, a member of the American Federation of Art, and of the Society of Beaux Arts Architects.

THE ROOSEVELT MEMORIAL

JOHAN RUSSELL POPE, of New York, has won the competition for the design for the Roosevelt Memorial to be erected in Washington. Announcement to that effect was made recently by James R. Garfield of Cleveland, President of the Roosevelt Memorial Association, after a meeting of the Association's Executive Committee at the Corcoran Gallery of Art. Mr. Pope's design was chosen by the Jury of Award, consisting of Paul Cret, Herbert Adams and Louis Ayres. The Association has appropriated \$1,000,000 for erecting this Memorial.



Telesco Partition
REG. U.S. PAT. OFF.
 IT TELESCOPES

A Movable Partition That Can Really Be Moved

ORDINARY wood and glass partition is held in place by pilasters *nailed* over the section joints. When moved to a new location the wood is split and damaged. Different ceiling heights cannot be met without extensive alterations.

Telesco Partition is erected entirely with screws. The sections are held firmly in place by the hollow posts that house the extension members that allow the partition to be extended or contracted for any ceiling height *without* alteration.

Telesco is a movable partition that can really be moved. May we give you complete details?

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

THE EDITOR'S FORUM

TABLET FOR OCTAGON HOUSE

PRIZES of \$150, \$100 and \$50 are offered by the American Institute of Architects for the best designs for a tablet or sign to be placed on the premises of the Octagon House, the headquarters of the Institute, at Washington. It is suggested that the proposed device take one or another of the following forms: a wall tablet to be fastened to the building; an inscription in individual bronze letters set into a stone or granite sidewalk leading to the front entrance; or a sign on a pole or standard. Drawings must be delivered anonymously to D. Everett Waid, President of the American Institute of Architects, at 1 Madison Avenue, New York, on or before January 1, 1926.

A competition for the Octagon House tablet was held earlier in the year, but the Jury, of which Howard Van Doren Shaw acted as Chairman, reported that none of the designs submitted were suitable. Most of the designs were too monumental and out of scale with the building, while others were not in keeping with its architectural dignity, or else unsuitable for other reasons. Octagon House is now among the few survivals in Washington of the early federal period. The city home of the well known Tayloe family, the head of which was Col. John Tayloe, a friend of Washington, Octagon House formed from the first the setting for a brilliant social life and the scene of lavish hospitality, which the Tayloes were careful to see suffered nothing from comparison with that which they dispensed at their ancestral plantation in Virginia. Washington himself selected the site for Octagon House and advised its purchase, although it is said that he did not live to see the building finally finished and occupied by the Tayloe family.

Historical distinction, however, was destined to attach to the house, even though the First of the Presidents did not cross its completed threshold. When in 1814 the British burned the White House, the President and Mrs. Madison moved hastily into Octagon House, which thus became a sort of improvised Executive Mansion, and here there was ratified the Treaty of Ghent which ended the war of 1812. Other events of historic interest have transpired within the building's walls during the

century and a quarter since it was built. Tradition asserts that its spacious rooms were lavishly furnished, as would be expected in the Washington home of an important Virginia family, and beautiful indeed must have been its interior with the fine

paneling and woodwork (still in place) forming a background for furnishings of the grace and character in vogue during the early decades of the nineteenth century, and for the costumes, partly French and partly English, which went so well with them.

It cannot be reported that the social brilliance of Octagon House has always been maintained in undiminished splendor. Neighborhoods change in Washington, just as they do everywhere else, and buildings as well as families and individuals have their periods of decline; and Octagon House had slipped down quite a number of the rungs of the social ladder before it was acquired by the American Institute of Architects, first by lease and then by purchase, and restored for use as its permanent home, for which it is well adapted.



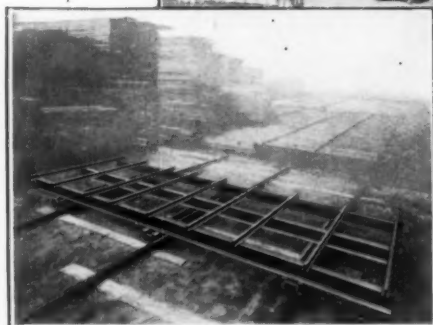
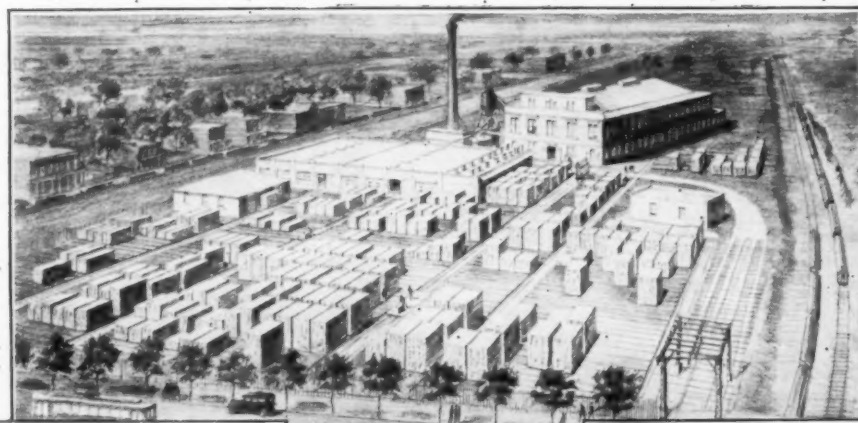
The Octagon House, Washington
Headquarters of the American Institute of Architects

A REPORT ON JAILS

VALUABLE data on prison buildings and conditions are given in the report submitted to the American Prison Association at Jackson, Miss., on November 10 by Dr. Hastings W. Hart, formerly President of the Association, and now Chairman of its Committee on Jails. The publication of the report, by the Russell Sage Foundation, is expected.

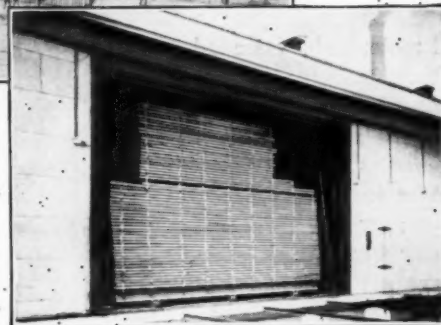
A COVER COMPETITION

DURING the last three years *The House Beautiful's* Cover Competition has been an annual event. The announcement of the fourth competition contains an addition to the usual number of prizes. The first prize is \$500, the second prize, \$250. In addition to these, this year, and in addition also to the possible purchase price of a design, is offered a special prize of \$100 with a certificate of merit for the best design submitted by a student of any school of art. The competition closes January 29, 1926. Full particulars regarding it may be obtained by writing to the Competition Committee, *The House Beautiful*, 8 Arlington Street, Boston

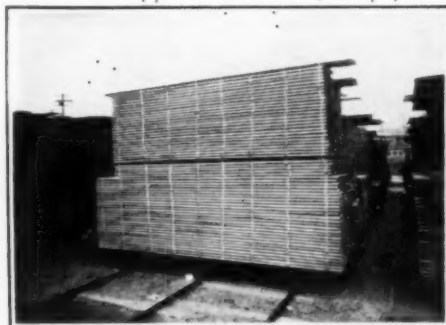


All Telesco lumber is piled on these rolling steel foundations, which keeps each board perfectly straight.

Telesco mill and yard. Over 2,000,000 feet storage capacity.



One of six modern automatic kilns, each holding a car of lumber.



Typical aisle in air dry storage. Six months air drying is necessary before lumber goes into kiln.



Telesco cooling shed where lumber is taken directly from kilns to cool slowly.

A Perfect Partition Needs Perfect Lumber

THE smoothness, the luster, the perfection of finish of Telesco Partition has long been a subject of comment.

It is impossible to produce a perfect cabinet job without perfect lumber.

To insure an adequate supply of lumber

of Telesco quality we have recently completed the most modern lumber drying and storage yard in the East.

Six automatic dry kilns, a cooling shed, laboratory and 2,000,000 feet air storage capacity, insure you the continuance of perfect Telesco Partition.

IMPROVED OFFICE PARTITION CO. 25 GRAND ST. ELMHURST, NEW YORK, N.Y.

A BACKGROUND OF NATIONAL REPUTATION

IN addition to its structural advantages Natco Hollow Tile brings to the building in which it is used a very definite prestige of its own. Years of service demonstrate the truth of the Natco story being told to millions of prospective builders in national publications—a story of Fire Safety, Comfort, Economy and Permanence. When you write Natco Tile into your specifications you are indicating a material known and trusted from coast to coast.

The Natco bulletins for architects will provide you with all necessary technical data and—perhaps—furnish some helpful suggestions. Write for them.

NATIONAL FIRE PROOFING CO.

601 Fulton Building PITTSBURGH, PA.

IN CANADA

National Fire Proofing Company of Canada, Ltd.,
Dominion Bank Building, Toronto, Ont.

NATCO

HOLLOW BUILDING TILE



TRUSCON FERRODECK Is Universally Accepted

*For Factories -
Schools - Hospitals -
Apartments - Stores -
and any building
requiring a straight-
away, light weight,
permanent roof
decking*



YOU
Cannot Duplicate
these features in any
Roof Construction

1 Lightest Weight Roofing
—Max. dead load $5\frac{1}{2}$ lbs. per sq. ft. including insulation and water proofing; $\frac{1}{2}$ the weight of wood— $\frac{1}{4}$ the weight of concrete 2" thick.

2 Non-Burning—Non-Warpable—Non-Shrinkable—an expansion joint every 2 ft.

3 Insulated to Any Degree as tight as a dry-kiln if necessary.

4 Final Cost Less than any other type of non-burning roof deck.

5 Least Time for Installation—can be built up without DELAY in any kind of weather at any time of year.

6 Equally Effective on flat, pitched or slightly curved roofs.

7 Roofing Contractors Will Furnish Complete Job—including Ferrodeck, insulation and waterproofing.

FERRODECKS Bridge the Gap **NON PLUS ULTRA**

TRUSCON Ferrodeck has earned its universal acceptance through sheer, outstanding merit. Its economy, permanence and satisfaction-giving qualities furnish such conspicuous advantages that architects and contractors everywhere are turning to this extraordinary roof decking as their natural and logical choice. Truscon Ferrodeck was designed and perfected with the definite object of providing a light weight roof—non-burning—thoroughly insulated and waterproofed—at minimum cost. Truscon Ferrodeck has accomplished this and even more. For, manufactured from copper alloy steel plates, it offers in addition maximum resistance to rust and corrosion. Truscon maintains a specialized corps of practical engineers for the application of Ferrodecks, always available for your service.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

Warehouses and Sales Offices in Principal Cities
Foreign Division: 60 West Street, New York City, U.S.A.
Trussed Concrete Steel Co. of Canada, Ltd., Walkerville, Ont.

TRUSCON STEEL COMPANY
YOUNGSTOWN OHIO, U. S. A.

Kindly mail literature on Truscon Ferrodeck.

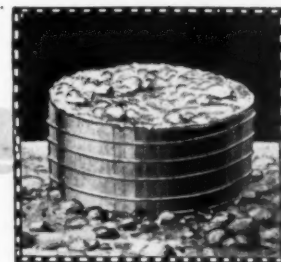
Interested in Roofs for

buildings.

Name

Address

TRUSCON
Ferrodeck
**INSULATED &
WATERPROOFED**



RAYMOND

is all you really need know about tapered concrete piles—because that specifies piles poured into spirally reinforced steel shells that are left in place in the ground as protection against adverse subsurface conditions.

RAYMOND CONCRETE PILE COMPANY

New York: 140 Cedar St.

Chicago: 111 W. Monroe St.

RAYMOND CONCRETE PILE CO., LTD.

Montreal, Canada

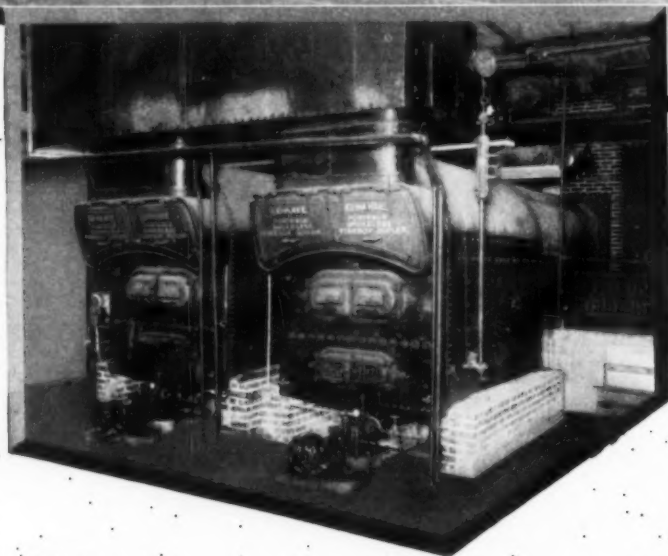
BRANCHES IN ALL PRINCIPAL CITIES

"A Form for Every Pile—A Pile for Every Purpose"

KEWANEE

*heats
entire
city block*

Steel (riveted) Firebox
Boilers with water tube
grate built-in at the
factory have circula-
tion that's unbeatable
for burning oil.



Accommodates 1250 Cars
Combined Floor Space, 266,000 Sq. Ft.

THE LARGEST GARAGE IN THE WORLD

17th, 18th, Pine and Chestnut Sts.
ST. LOUIS, MO.

Architects: KLIPSTEIN AND RATHMANN

General Contractors:

FRUIN-COLNÓN CONTRACTING CO.

Heating Contractors: URBAUER-ATWOOD CO.

HEATING BOILER INSTALLATION

Two No. 318 Kewanee Down-Draft Boilers
12,000 Square Feet Radiation Each, Rated Capacity
Equipped with Hardinge Oil Burner



KEWANEE BOILER COMPANY KEWANEE, ILLINOIS

Atlanta, Ga.
Birmingham, Ala.
Boston, Mass.
Charlotte, N. C.
Chattanooga, Tenn.
Chicago, Ill.

Cincinnati, O.
Cleveland, O.
Dallas, Texas.
Denver, Colo.
Des Moines, Ia.
Detroit, Mich.

El Paso, Texas.
Grand Rapids, Mich.
Indianapolis, Ind.
Kansas City, Mo.

BRANCHES

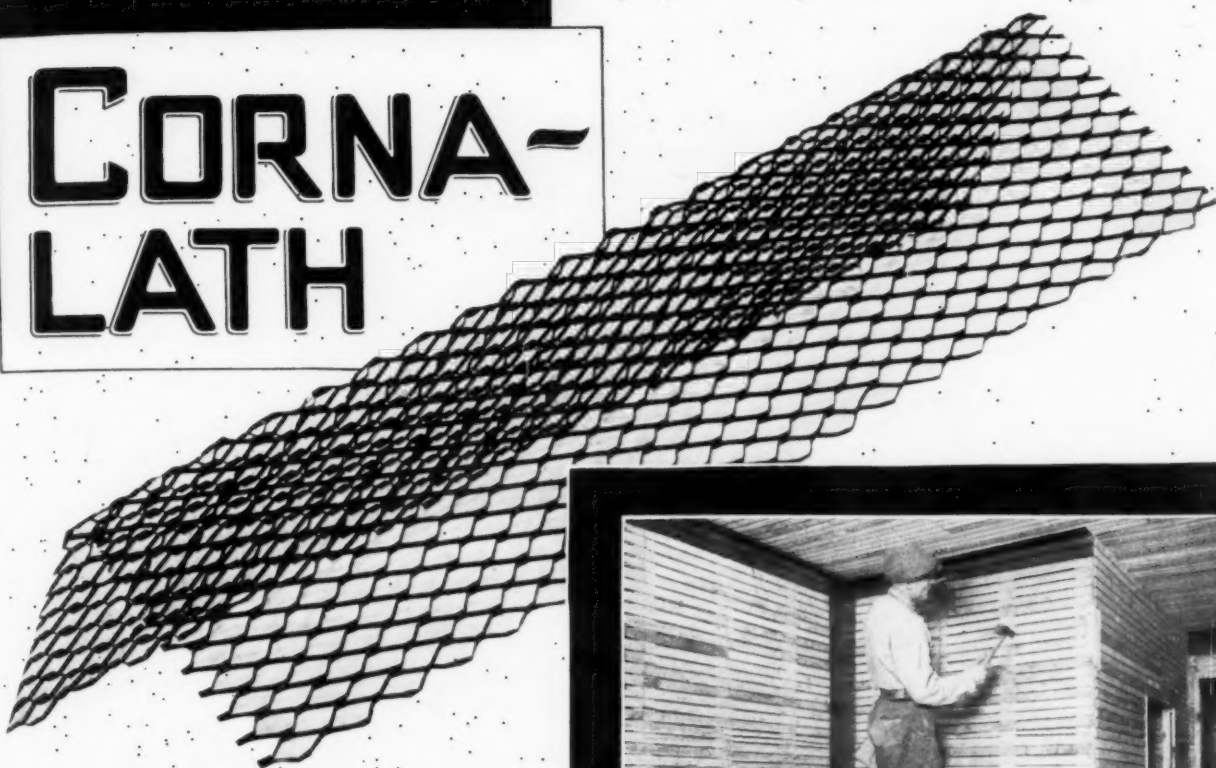
Los Angeles, Calif.
Memphis, Tenn.
Milwaukee, Wis.
Minneapolis, Minn.

New Orleans, La.
Philadelphia, Pa.
Pittsburgh, Pa.
St. Louis, Mo.
Salt Lake City, U.
San Antonio, Tex.

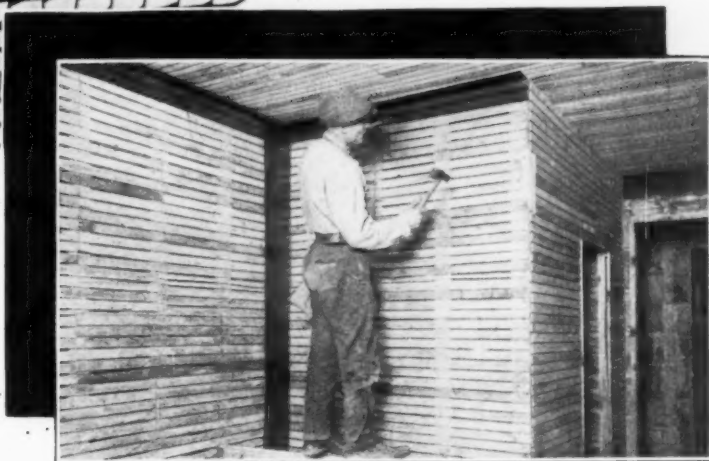
San Francisco, Cal.
Seattle, Wash.
Spokane, Wash.
Toledo, O.
Toronto, Ont., Canada.
New York City, N.Y.

STEEL HEATING BOILERS, RADIATORS, WATER HEATERS, TANKS AND WATER HEATING GARBAGE BURNERS

CORNA-LATH



The flanges in CORNA-LATH are $\frac{1}{4}$ in. wide. Strips are 8 ft. long and packed 25 to bundle. Carefully crated to assure its reaching job free from dents or kinks.



"It Should Have Been Made Long Since"

ARCHITECTS have long known that corner cracks in wood lathed or plaster board buildings could largely be prevented by reinforcing all inside vertical corners and where wall and ceiling intersect with metal lath.

Until now, however, it has been necessary for the contractor to cut and form these metal lath strips by hand, on the job—a slow and clumsy expedient, now made unnecessary by the new, shop fabricated, CORNA-LATH.

These scientifically correct, sharp, true reinforcing angles or "L's" are as far superior to a "home made" cornerite as is a tailored suit to home made pants. Their use is a time saver. And they reinforce the plastering where the strain is greatest.

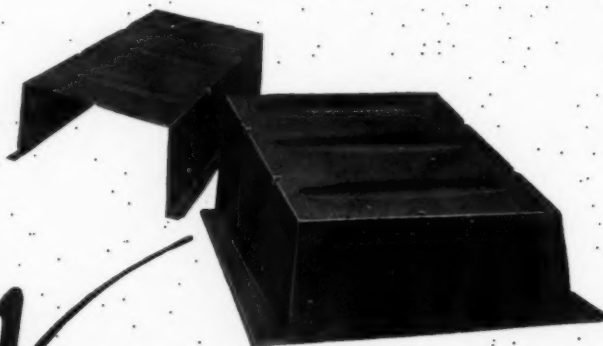
CORNA-LATH costs so little that it can be used even in the most moderate priced construction. And it contributes very greatly toward a better and more durable plastering job.

You will unquestionably wish to give this new and better "cornerite" a trial. Obtainable of all good building supply dealers or write us for descriptive circular.

NORTH WESTERN
EXPANDED METAL CO.

1234 Old Colony Bldg.

Chicago



Why

MEYER STEELFORMS *Actually* SAVE Concrete - Steel - Form Work - Time and Labor



MEYER REMOVABLE STEELFORMS are made in standard units. The most economical size of concrete joists for all conditions of loading and span may always be obtained. Full benefit of the tee section of every joist is secured, eliminating all non-carrying concrete and effecting savings in dead load throughout beams, columns and footings.

The sturdy strength of 16 gauge metal combined with the ingeniously designed stiffening ribs in Meyer Steelforms insures the sizes of concrete members exactly as called for by the plans.

Only a bare skeleton of form work is required for Meyer Steelforms. Meyer

MEYER STEELFORM construction is a standard system of concrete floor construction in present day use by architects, engineers and contractors in important structures throughout the entire United States.

Steelform double and single tapered end-forms have wide flat flanges for nailing to centering which obviates the necessity of stripping the 2x6 joist bottom where the joist widens out at the support.

Tees on the beams are formed by the steelforms and not with wood. Flat nailing flanges eliminate the exact spacing of 2x6 joist soffits.

The simplicity of the centering, 2x6 joist soffits, ledgers about 4' on centers and upright supports with bracing—there are no frills of any kind—reduces labor costs to the minimum and promotes speed of erection.

Meyer Steelforms are sold on a rental basis, including the installation and removal, and the economies effected by constant re-use and wide distribution are reflected in our prices.

MEYER STEELFORMS

for lower formwork costs

For more detailed information relative to Meyer Steelforms, send for our handbook of Fireproof Construction.



Our large stock of MEYER STEELFORM equipment at all warehouses assures quicker delivery to the job.

CONCRETE ENGINEERING CO. Omaha

Chicago-Detroit-Omaha-Milwaukee-Kansas City-Des Moines-Dallas-Minneapolis-St. Louis-Houston

Ceco
PRODUCTS
for Permanent Building



Our Engineering Service

Our sales organization and engineering department is technically trained and each member is ready to assist the architect, contractor or engineer with layouts and estimates for the reinforced concrete portion of building work.



ELKS NATIONAL MEMORIAL HEADQUARTERS BLDG.
CHICAGO, ILLINOIS

EGERTON SWARTWOUT, Architect

GUASTAVINO TIMBREL TILE ROOF DOME
80 feet span carrying a 4 inch stone finish,
and stone steps at base.

R. GUASTAVINO COMPANY

40 COURT ST., BOSTON, MASS.

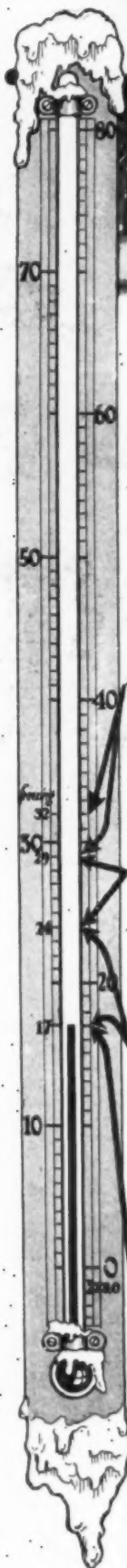
1133 BROADWAY, NEW YORK, N. Y.

Representatives in Canada:

C. G. PORTER & CO., Montreal, P. Q.

WILLIAM J. BANKS, Quebec, P. Q.

Pour concrete all winter!



29° to 32° use
1 Gal. of GF12
to every 10
Gals. of water

24° to 29° use
2 Gals. of GF12
to every 10
Gals. of water

17° to 24° use
3 Gals. of GF12
to every 10
Gals. of water

GF12 keeps
Concrete
from freez-
ing with tem-
perature as
low as 17°



GF12 Speeds Up Setting and Prevents Freezing

THE use of GF 12 Cement Accelerator is a simple precaution that makes concrete construction in cold weather as practical as summer work. It does away with the expense of heating equipment, of fuel, of tarpaulins, or of sawdust to protect the work. GF 12 is merely mixed with the gauging water. It requires no extra labor. Its chemical action enables the setting process of the concrete to go on at temperatures as low as 15 degrees below the normal freezing point.

Contractors find that GF 12 saves more money than it costs. Besides acting as a sure Frost Preventative, it is a Cement Accelerator, Concrete Hardener and Waterproofer. It is used all year round—increases volume of work in all temperatures, puts equipment, otherwise idle, to work in winter.

If you are unfamiliar with the use of GF 12 Cement Accelerator, do not delay in writing for the "GF Waterproofing Handbook." It is filled with valuable information that will help you solve your construction problems. Write for it today.

A Few GF Waterproofing Products

GF Integral Waterproofing Paste (GF10).
Mixed with the gauging water to waterproof mass concrete.

GF Membrane Materials. For walls and surfaces under hydrostatic pressure.

GF Transparent Waterproofing (GF100).
A brush coating for waterproofing concrete, stucco and masonry surfaces.

GF Cement Paint (GF102). For decorating interior and exterior surfaces of brick, concrete, tile and stucco.

GF Damp-proofing Coating (GF200).
A brush treatment for masonry surfaces, to be plastered.

GF Plastic Cement (GF250). A plastic waterproof cement.

GF Crystalrox (GF145). For hardening and dust-proofing new and old concrete floors.

GF Cement Accelerator (GF12). Quickens setting of cement and prevents freezing of mixture.

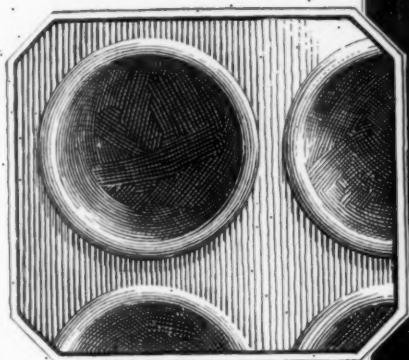
THE GENERAL FIREPROOFING BUILDING PRODUCTS, Youngstown, O.
Branches in All Principal Cities
Expo t Department: 90 West Street, New York City
Cable Address: "Firegen-New York"

GF Waterproofings
And Preservative Products

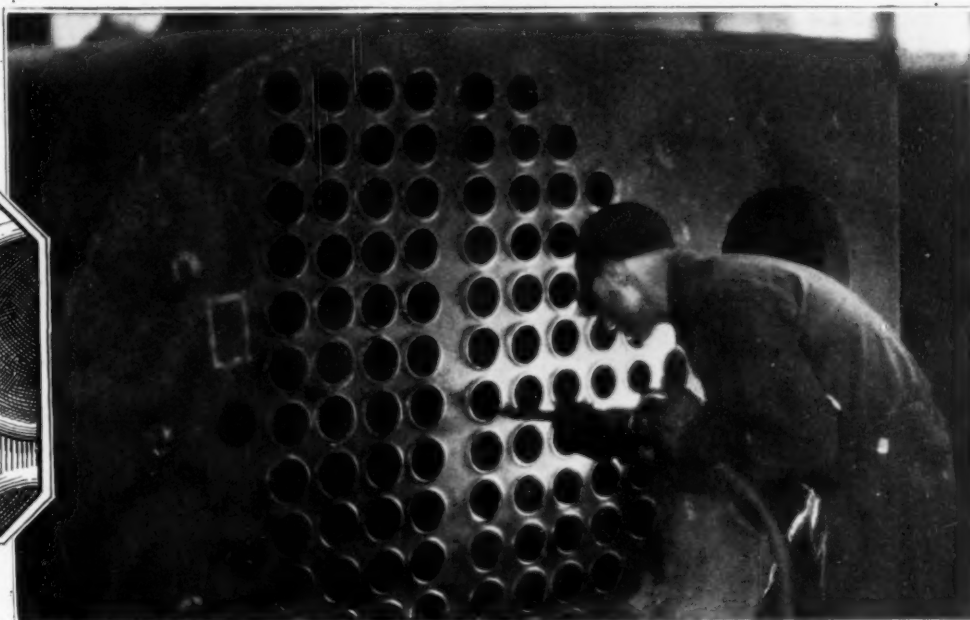
HEGGIE-SIMPLEX

[FORMERLY SIMPLEX]

ELECTRIC-WELDED STEEL BOILERS



Expanding and beading
make tubes water-tight.



Quality Assured by Thorough, Unhurried and Experienced Workmanship

The Heggie-Simplex Boiler combines in one portable, electric-welded steel unit all the recognized advantages of both firebox and return tubular, double pass boilers. It has four distinctive features of fundamental importance:

1. Extra large firebox and direct heating surface.
2. Secondary combustion chamber to provide ample room for complete combustion before entering flues.
3. "Rear-front-rear" passage for the gases.
4. A single, unimpeded, freely circulating body of water.

Made in both smokeless and direct draft types and in a complete range of sizes for bungalows, residences and all larger installations.

QUANTITY workmanship unites with quality material and the latest approved design to make Heggie-Simplex Heating Boilers a quality product throughout.

All Heggie-Simplex workmen are carefully trained under the time-honored apprenticeship plan. Only skilled workmen are utilized. The day work basis is employed throughout, to insure careful, thorough, unhurried craftsmanship. No green hands—no piece-work—no records for speed. The emphasis is always on *quality*.

Our rigid, step-by-step inspection in process prevents hasty, careless or faulty work—and makes possible our guaranty of the materials and workmanship in every Heggie-Simplex Boiler, as well as the capacities for which they are rated.

Detailed specifications and illustrated catalog on request.

HEGGIE-SIMPLEX BOILER COMPANY, Joliet, Illinois

Representatives in

Akron	Charlotte	Denver
Albuquerque	Chattanooga	Detroit
Amarillo	Chicago	Duluth
Atlanta	Cincinnati	Elmira
Baltimore	Cleveland	El Paso
Birmingham	Columbus	Harrisburg
Buffalo	Dallas	Houston
Casper	Dayton	Jacksonville



Representatives in

Joliet	New York	San Antonio
Kan. City, Mo.	Okla. City	Schenectady
Little Rock	Omaha	Shreveport
Lubbock	Philadelphia	Spartanburg
Memphis	Pittsburgh	St. Louis
Minneapolis	Raleigh	Tampa
Nashville	Rochester	Toledo
New Orleans	Rockford	Tulsa

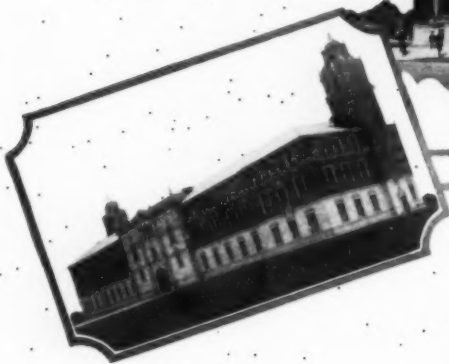
Just look up "Heggie-Simplex Boiler Co." in the phone book in any of the above cities for representative's number and address



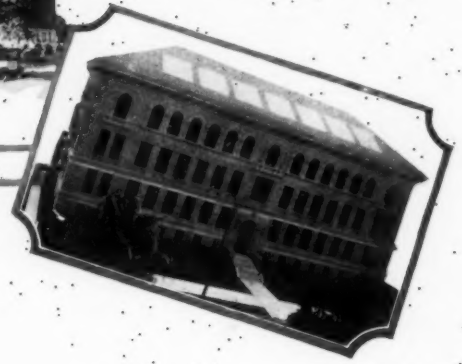
Administration Building
Texas Technological College
Lubbock, Texas
Sanguinet, Staats & Hedrick
William Ward Watkin
Associated Architects
Ramey Const. Co., Builders



Laboratory Building
Medical College, University of Texas
Galveston, Texas
Herbert M. Greene Co., Architects
Munn Const. Co., Builders



McFarlin Memorial Auditorium
Southern Methodist University
Dallas, Texas
R. H. Hunt Co., Architects
Bellows-MacLay Const. Co., Builders
Robt. M. McFarlin, Donor



Color-expression of many of America's leading architects is being accomplished through the medium of

ACME BRICK

Correct shadings and careful plant service from six large Acme-owned factories enable us to offer "A Brick for Every Type—A Color for Every Color Scheme."

Acme Brick Company

Manufacturers

Plants—Owned and Operated

Bennetts and Denton, Texas Ft. Smith and Perla, Arkansas
Cleveland and Oklahoma City, Oklahoma

Offices and Display Rooms

Amarillo, Texas
Beaumont, Texas
Dallas, Texas

Ft. Smith, Arkansas
Fort Worth, Texas
Galveston, Texas
Houston, Texas

Lake Charles, La.
Little Rock, Ark.
Memphis, Tenn.
New Orleans, La.

Oklahoma City, Okla.
Port Arthur, Texas
San Antonio, Texas
Shreveport, La.

Tulsa, Oklahoma
Waco, Texas
Wichita Falls, Texas

*Make Our Display Rooms YOUR Workshop
For Solving Color Schemes*

AMERICA NEEDS MORE GARAGES IN HER CITIES

Combination Buildings



Circle Motor Inn, Indianapolis, has the appearance of a high grade office building. It is—in part. But $\frac{3}{5}$ of its total floor space is designed for garage use.

The importance of convenient car storage and parking facilities is so important in protecting the leasing of professional offices, stores and apartments, that architects and owners now think of garage space as a necessary part of the building's service equipment.

For a building now in use, the needful garage can be erected nearby or adjoining. And where the local building code permits no alternative, this separation may also be necessary in the case of a new apartment house or other building.

There is a distinct tendency, however, to provide garage floors integral with the principal structure. Automobile storage can be relegated to the rear or poorly lighted portion of the building—and can make profitable use of basement space. We have information on several typical buildings that can be sent on request.

In developing owner interest in multi-floor garage construction, our Bulletin "F" "Building Garages for Profitable Operation" will be helpful. Shall we send you a copy?



RAMP BUILDINGS CORPORATION

21 East 40th Street

New York, N. Y.

GARAGE ENGINEERS

CONSULTANTS ON PROMOTION AND GARAGE OPERATION



ZENITHERM

Ideal for Ecclesiastical Structures

By using ZENITHERM in chapel and cloister of St. Rose of Lima Convent, New York City, Robert J. Reilly secured results in perfect accord with ecclesiastical requirements. The ZENITHERM walls, curved soffits, niches and ornamental corbels have all the desired effects of beauty and churchly dignity, while the ZENITHERM floors are ideal because they are noiseless, resilient and easy to clean.

ZENITHERM increases acoustic values, is fire-proof, weatherproof and enduring. ZENITHERM looks like stone and works like wood.

These distinctive qualities make ZENITHERM particularly suitable for all ecclesiastical buildings.

Write for descriptive booklet

ZENITHERM CO., Inc.

Newark, N. J. Sales Office, 405 Lexington Ave., N. Y.



St. Rose of Lima
Chapel and Cloister

Zenitherm Walls and
Floors

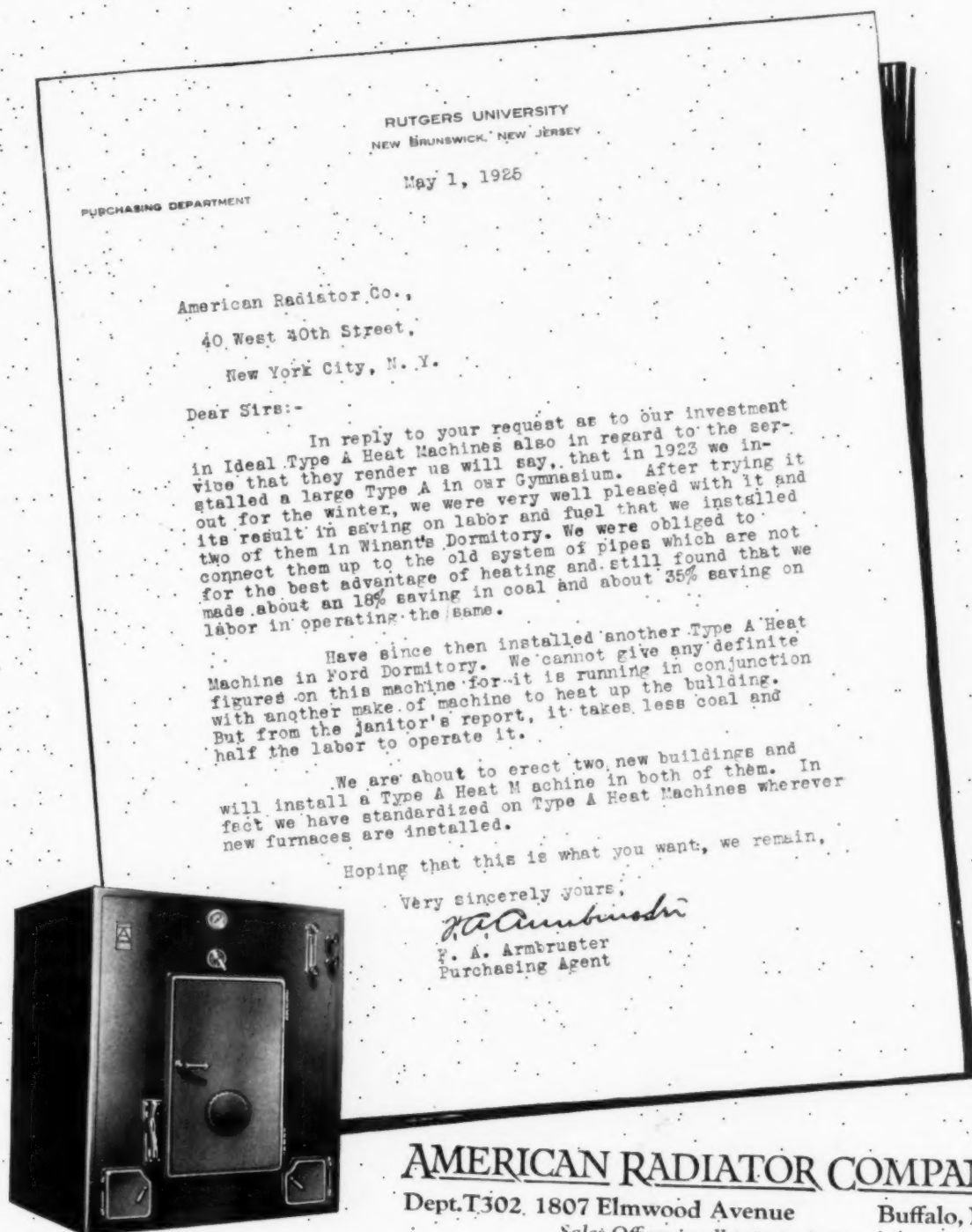
Architect:
ROBT. J. REILLY

Looks like stone - Works like wood

ZENITHERM

The Universal Building Material

How Ideal Type "A" Heat Machine reduces heating cost for Rutgers



RUTGERS UNIVERSITY
NEW BRUNSWICK, NEW JERSEY

May 1, 1925

PURCHASING DEPARTMENT

American Radiator Co.,
40 West 40th Street,
New York City, N. Y.

Dear Sirs:-

In reply to your request as to our investment in Ideal Type A Heat Machines also in regard to the service that they render us will say, that in 1923 we installed a large Type A in our Gymnasium. After trying it out for the winter, we were very well pleased with it and its result in saving on labor and fuel that we installed two of them in Winant's Dormitory. We were obliged to connect them up to the old system of pipes which are not for the best advantage of heating and still found that we made about an 18% saving in coal and about 35% saving on labor in operating the same.

Have since then installed another Type A Heat Machine in Ford Dormitory. We cannot give any definite figures on this machine for it is running in conjunction with another make of machine to heat up the building. But from the janitor's report, it takes less coal and half the labor to operate it.

We are about to erect two new buildings and will install a Type A Heat Machine in both of them. In fact we have standardized on Type A Heat Machines wherever new furnaces are installed.

Hoping that this is what you want, we remain,

Very sincerely yours,

F. A. Armbruster
F. A. Armbruster
Purchasing Agent

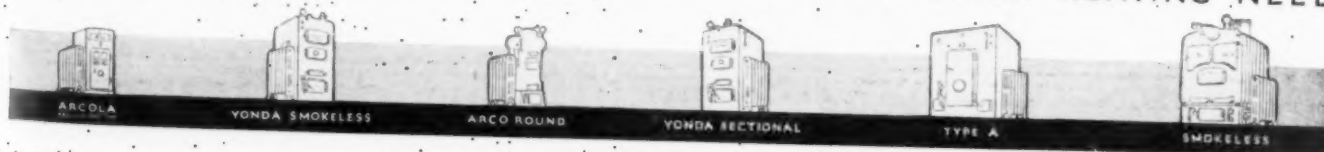
AMERICAN RADIATOR COMPANY

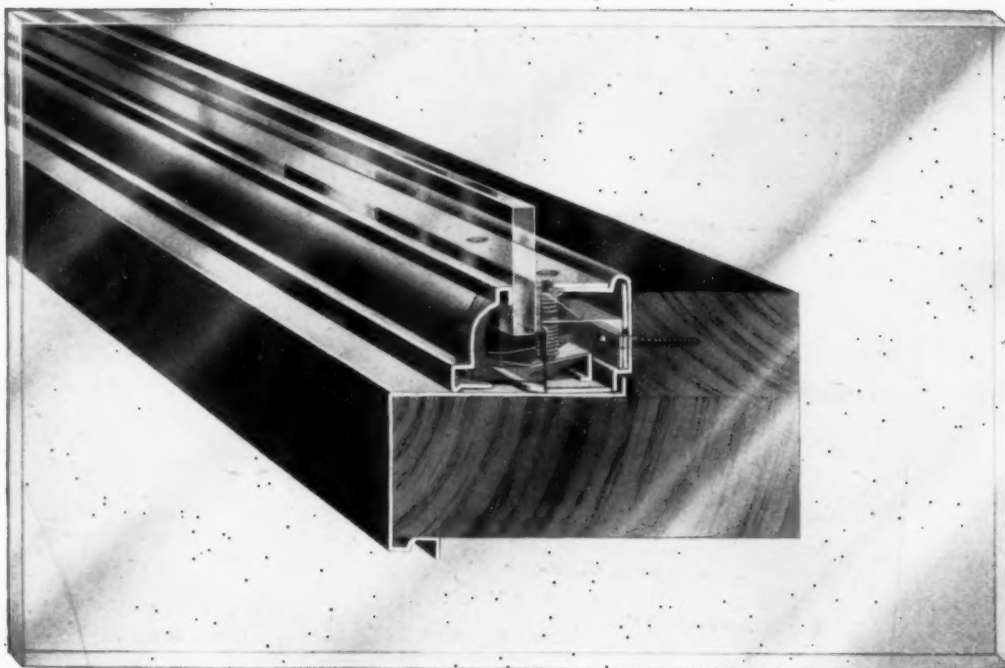
Dept. T302, 1807 Elmwood Avenue

Buffalo, N. Y.

Sales Offices in all principal cities

IDEAL BOILERS AND AMERICAN RADIATORS FOR EVERY HEATING NEED

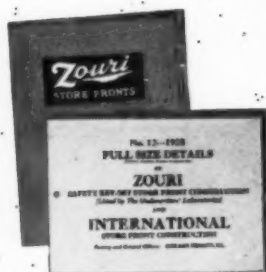




Zouri Indirect Key

BEHIND a broad expanse of plate glass stands Zouri — protection for both architect and client.

Protection during installation, for the Key-Set construction distributes pressure equally at all contact points, eliminating the starting point for glass breakage. Protection after installation, for Zouri's gentle grip takes the shock



Useful detail sheets and data book

This handbook has been written for architects, contractors and builders. It deals primarily with construction and gives plans and diagrams showing best approved methods of window and display space arrangement. The detail drawings will be welcomed by specification writers. A word from you will bring them—promptly.

ZOURI KEY-SET STORE FRONT CONSTRUCTION



-Set Store Fronts

out of sudden wind flurries, or accidental jolts and jars.

With the Zouri Key, setting is easy. Once the glass is in place, a twist of the keys brings the full length of copper moulding face into place, and holds it rigidly.

Merchants, knowing Zouri is approved by the Underwriters, have confidence in it—added reason for satisfaction in their attractive, trade-pulling windows.

Zouri Drawn Metals Company

Factory and General Offices

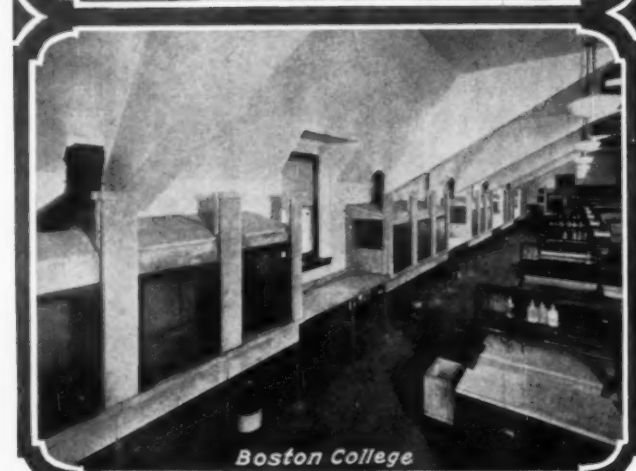
1608 East End Avenue, Chicago Heights, Illinois

DISTRIBUTORS IN PRINCIPAL CITIES—NAMES ON REQUEST

LISTED BY THE UNDERWRITERS LABORATORIES

ACID - ALKALI - AND - FLAME - RESISTANT NON - ABSORBENT NON - CONDUCTING

For The Laboratory



THE right kind of a laboratory is the only satisfactory background for accuracy and efficiency in laboratory work—which demand fixed equipment, as well as general lay-out and design, that is exactly right.

Experience of 20 years—in hundreds of modern educational, scientific and industrial laboratories — demonstrates conclusively that Alberene Stone meets every laboratory requirement as no other material does.

Alberene Stone is a natural quarried stone—hard, dense, close-grained, non-porous, non-absorbent. It is chemically inert and highly resistant to acids and alkalis even in the presence of high temperature. It is wear-proof, heat-and-cold-proof, moisture-proof. Its surface will not chip, flake or pit, is smooth and easily kept clean. It can be sawed, grooved, tongued, turned, shaped and fabricated in any desired form, without chipping or spalling.

Alberene Stone, moreover, is the least expensive material that can be used for laboratory fixed equipment. Its first cost—never higher than that of substitute materials—is its one and only cost, because of its time-and-service-defying qualities.

Write for the bulletin on Alberene Stone Laboratory Equipment, giving details and specifications. The specialized experience of the Company's technical experts is freely offered to all without cost or obligation.

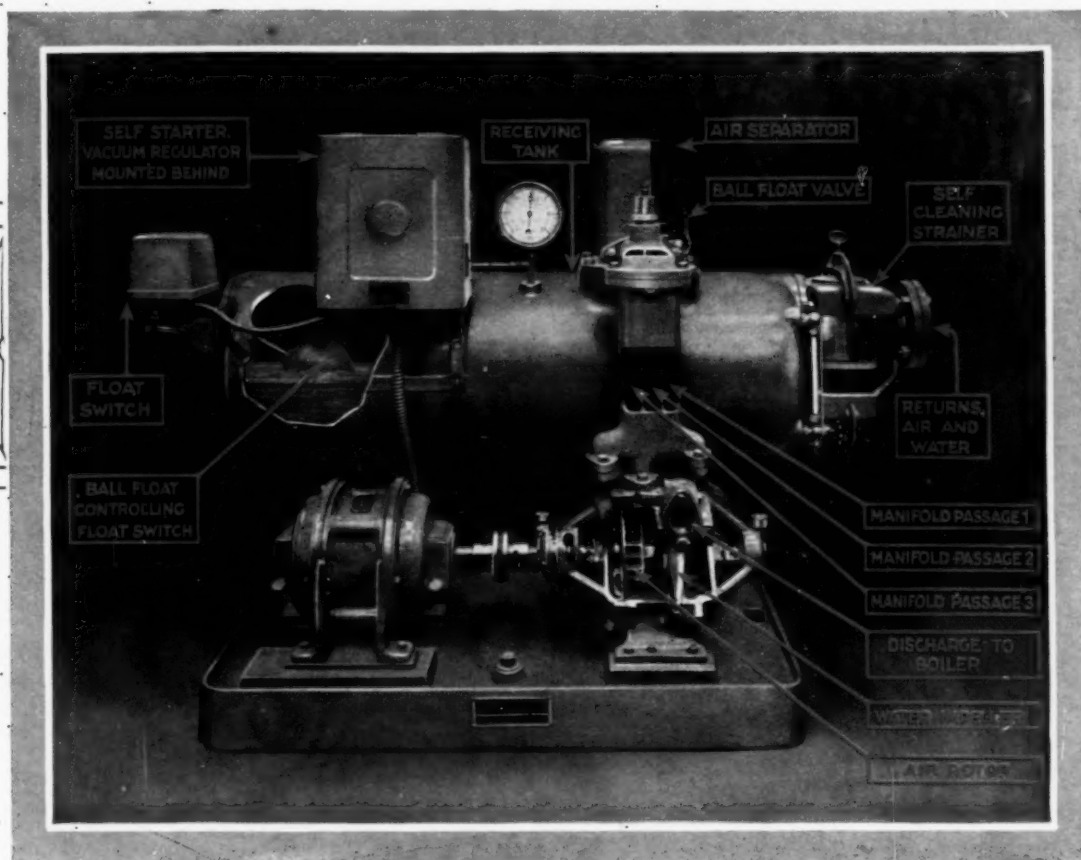
ALBERENE STONE COMPANY
153 WEST 23rd STREET, NEW YORK
Baltimore Boston Buffalo Chicago Cleveland Newark
Philadelphia Pittsburgh Richmond St. Louis

ALBERENE STONE

QUARRIED FOR OVER 40 YEARS

THE INDESTRUCTIBLE MATERIAL FOR LABORATORY USE

STANDARD ALSO FOR TOILET, URINAL AND SHOWER PARTITIONS; STAIR TREADS, ELECTRICAL CONSTRUCTION



The longer it serves, the greater the saving

There is nothing to equal the confidence which an owner places in a Jennings Hytor Heating Pump, particularly after it has had a chance of demonstrating characteristic Hytor dependability through many years of matchless performance.

As it continues to serve faithfully season after season, without any of the troublesome upkeep experienced with other pumps of inferior

construction, the true worth of a Hytor becomes more and more valued.

Almost incredible savings in fuel, motor horsepower, in maintenance and upkeep, - these are the economies Hytors never fail to provide.

The Jennings Hytor is built to make good, and it does, - not for one season only, but throughout the life of the building it serves.

THE NASH ENGINEERING COMPANY SOUTH NORWALK, CONNECTICUT

BRANCH OFFICES - UNITED STATES: Atlanta, Boston, Buffalo, Chicago, Cleveland, Dallas, Denver, Detroit, Houston, Indianapolis, Kansas City, Los Angeles, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, Portland, Richmond, St. Louis, Salt Lake City, San Francisco, Seattle,



Washington. OFFICES IN CANADA: Montreal, Toronto, and Vancouver. EUROPEAN OFFICES: London, England, Norman Engineering Co. Brussels, Belgium, and Amsterdam, Holland, Louis Reijnders & Co. Oslo, Norway and Stockholm, Sweden, Lorentzen & Wettre.

Jennings Hytor

RETURN LINE AND AIR LINE VACUUM PUMPS CONDENSATION AND CIRCULATING PUMPS

"How's this for speed!"



Roof with CEMENTITE

The Roof Everlasting

American Cement Tile Manufacturing Co.

Oliver Building, Pittsburgh, Pa.

PLANTS: Wampum, Pa.; Lincoln, N.J.; Birmingham, Ala.

OFFICES: Pittsburgh-New York-Philadelphia-Cleveland-Birmingham



BATCHELDER TILES



(This billiard room illustrates the wide adaptability of Batchelder Tile—flooring, wainscoting and stair treads are used throughout)



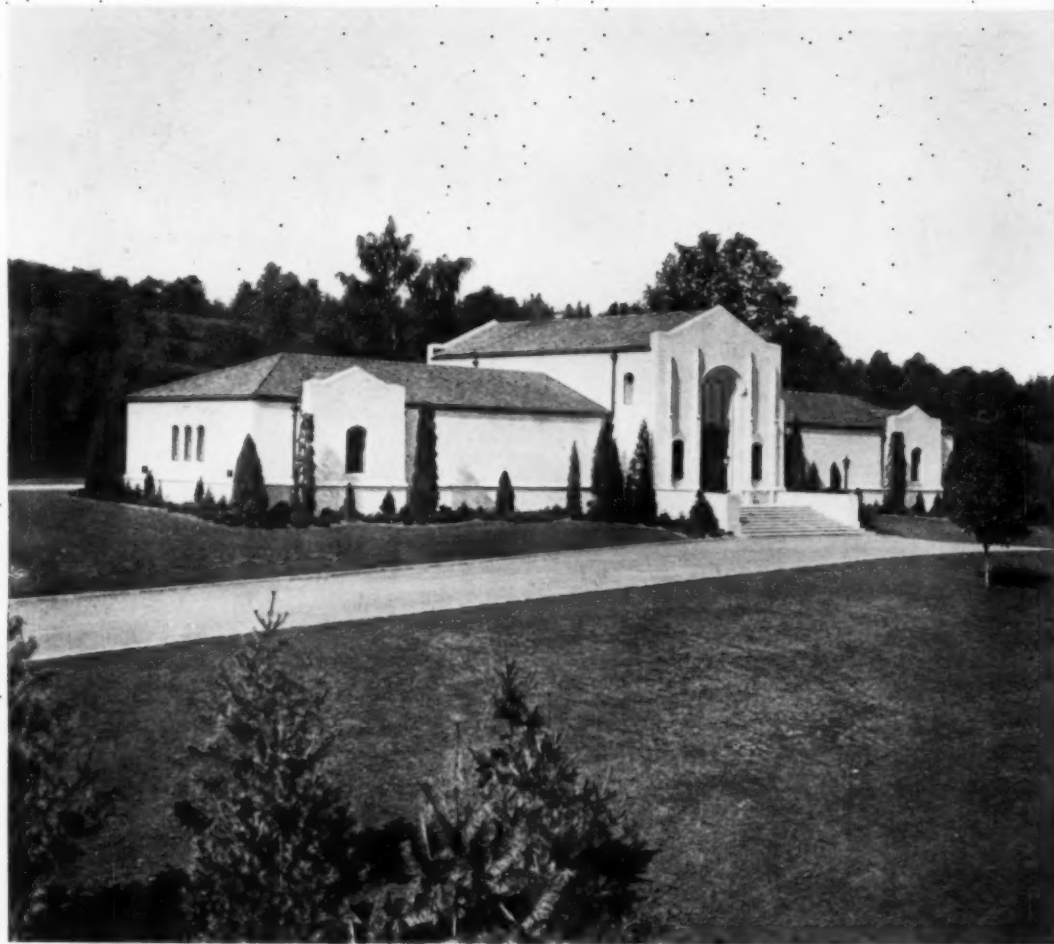
HERE is real inspiration in working with Batchelder Tiles....they offer a fertile field for creative work.

Because their rich, delicate colors and contrasting glazes and textures harmoniously blend with any architectural or decorative scheme, they are as the colors on the artist's palette....the medium through which beauty may be made a thing of permanence.

Designs and finishes are many and varied. Specify Batchelder Tiles for fountains, mantels, pavements, wainscotings or baths.... you'll be delighted with the results.

See Sweet's Catalogue or write for complete information.

BATCHELDER-WILSON COMPANY
2633 Artesian Street, Los Angeles
101 Park Avenue, New York City



KENSICO MAUSOLEUM, WESTCHESTER COUNTY
Sidney Lovell, Architect, Chicago

Enduring Beauty

Because of its beauty and durable qualities Pink Georgia Marble was selected by Kensico for their new mausoleum.

Many stones were considered for this vault; but Pink Georgia Marble was chosen as the most suitable.

THE GEORGIA MARBLE COMPANY

TATE, GEORGIA

NEW YORK
1328 Broadway

ATLANTA
804 Bona Allen Bldg.

CHICAGO
456 Monadnock Bldg.

LET IT RAIN

Zinc is always ready for rain.

It cannot rust. Zinc roofing

equipment is permanent pro-

tection against the elements;

heat or cold, rain or snow

do not affect it. It will last

a lifetime without repair.

And it is not expensive.

The cost of Horse Head Zinc,

figured on the basis of its

long life and its freedom from

expense either for repair

or replacement, is lower than

that of any other metal.

The New Jersey Zinc Company

Established 1848

Products Distributed by

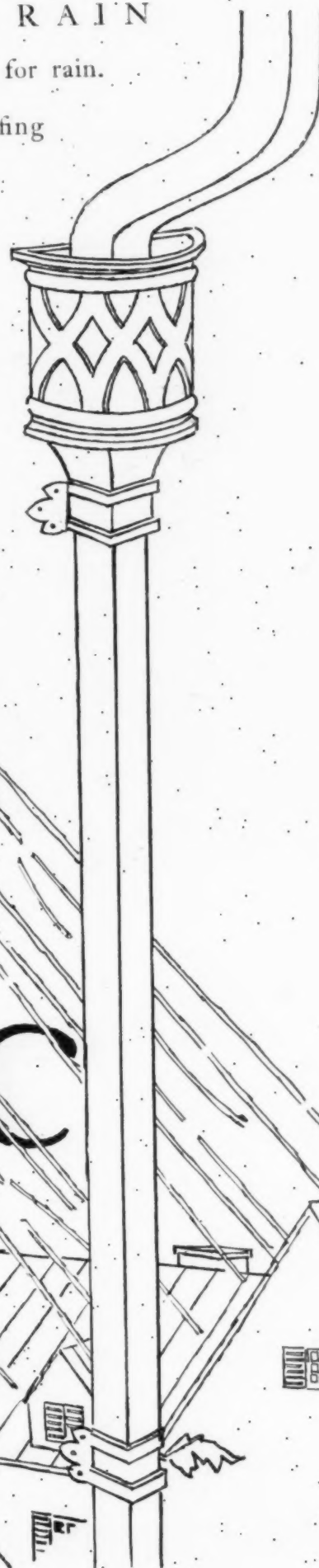
The New Jersey Zinc Sales Company

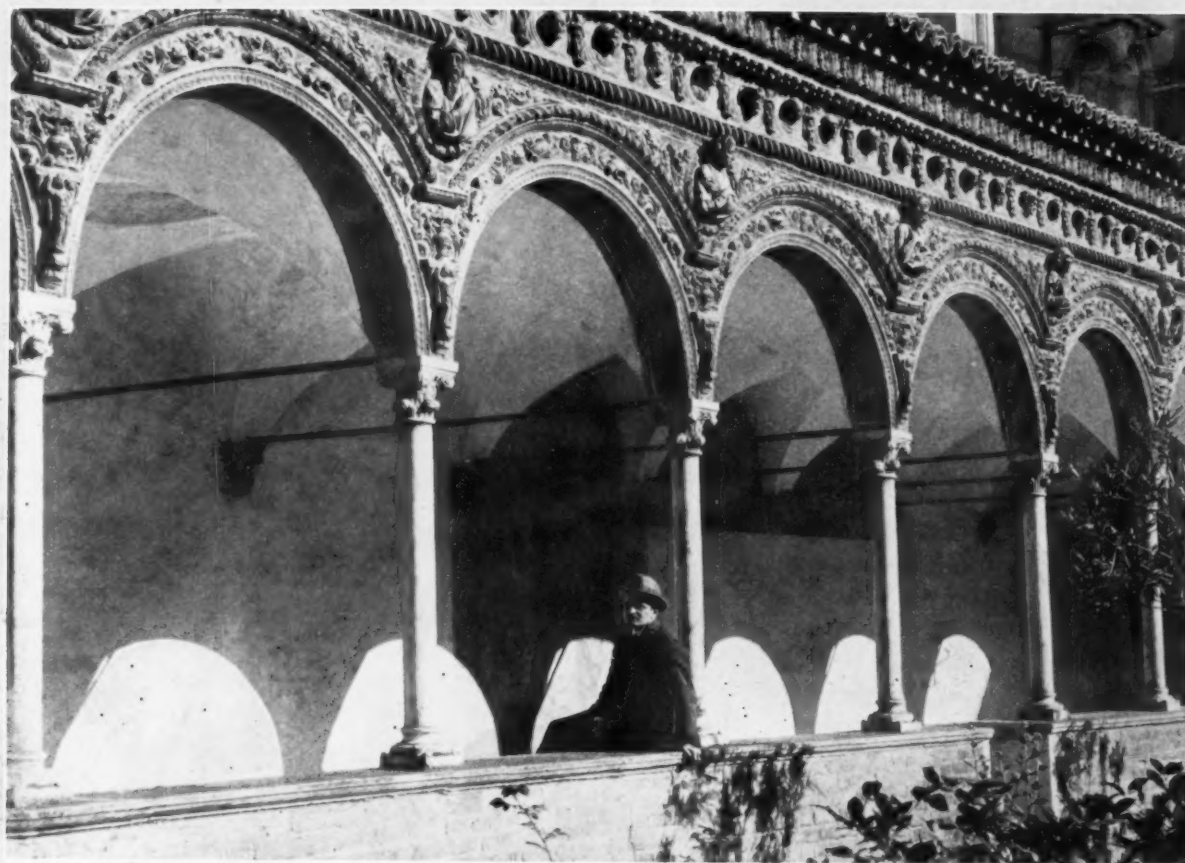
160 Front Street, New York City

CHICAGO • PITTSBURGH • CLEVELAND • SAN FRANCISCO

zinc

New Jersey
zinc





*Pavia—Certosa Di Pavia
Terra Cotta Detail Court of the Fountain*

“TERRA COTTA *of the* ITALIAN RENAISSANCE”

THE first permanently bound work presenting a comprehensive survey of the Terra Cotta Architecture of early Italy.

This volume contains 200 full page plates devoted entirely to illustration of old Italian precedent.

It is offered at the nominal price of \$3.00. Copies will be sent on approval to architects, draftsmen and students of architecture. Address

NATIONAL TERRA COTTA SOCIETY

19 WEST 44th STREET

NEW YORK, N. Y.



CHAMBERS & THOMAS, BUENOS AIRES, ARCHITECTS. YORK & SAWYER, NEW YORK, CONSULTING ARCHITECTS

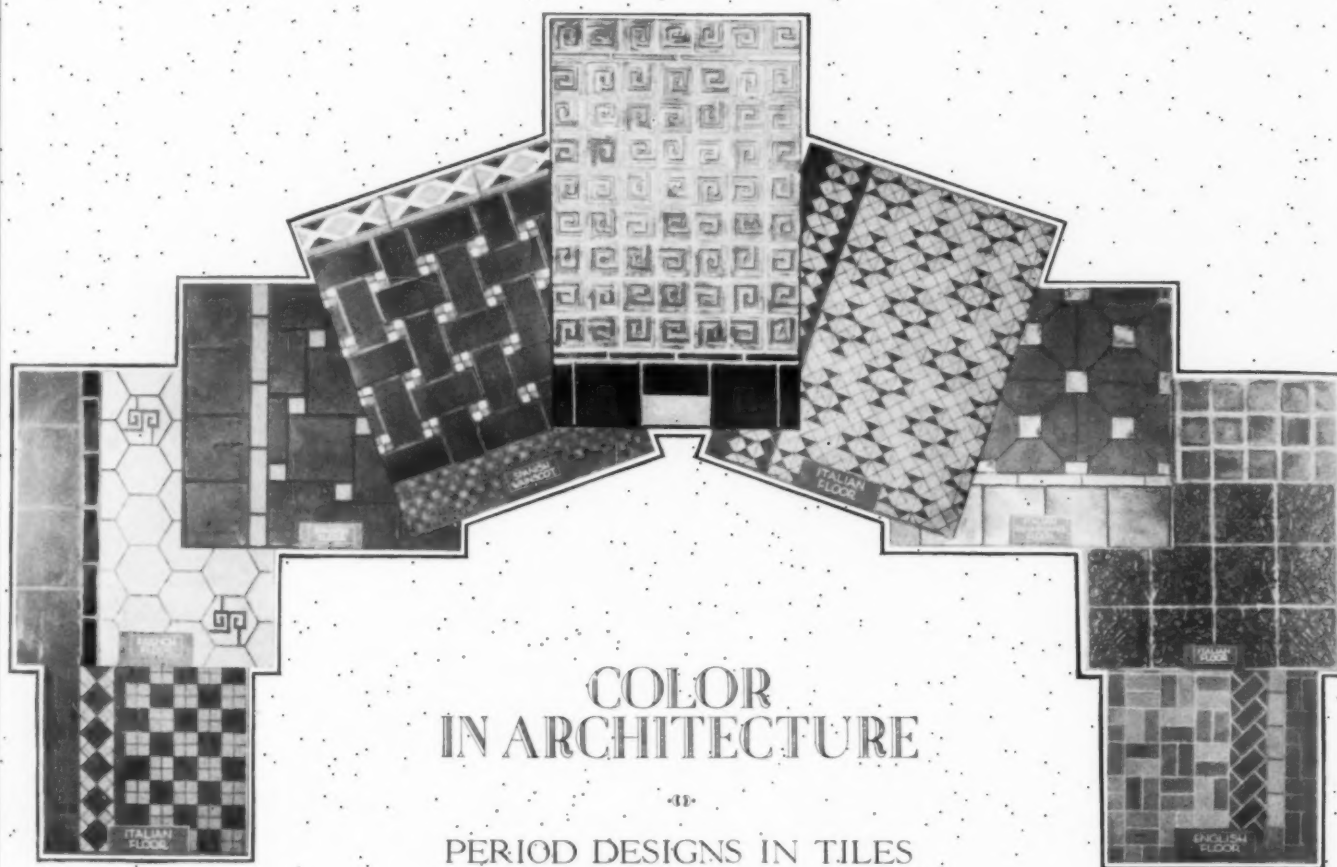
The First National Bank of Boston Building is the finest business structure in South America

Isaac F. Marcossou, in the SATURDAY EVENING POST, Sept. 5, 1925



STONE & WEBSTER
INCORPORATED
BUILDERS





COLOR IN ARCHITECTURE

41

PERIOD DESIGNS IN TILES

IN a series of twelve brief preachments we have set forth the breadth of appeal, the wonder and beauty, and the variety of application that COLOR IN ARCHITECTURE presents. Our citations and examples have been drawn from sources as widely flung as ancient Mexico of the Aztecs and predynastic Egypt, as peerless Greece and sunny Spain. In all ages and times, in all countries and climes the appeal of COLOR has ever been potent and inspiring. In concluding this series we would remind the ARCHITECT of the myriad expressions of COLOR IN ARCHITECTURE possible in that peerless medium of *permanent color*—BEAUTIFUL TILES.

To the ARCHITECT of our time all the wonderful possibilities of PERIOD DECORATION IN TILES—be it an English Baronial floor, a Spanish Renaissance breakfast nook, an Italian Medieval pavement, a Venetian bath, a Moorish fountain, or a Chinese shrine—are made available through numerous designs by the architectural service of the Associated Tile Manufacturers.

ARCHITECTS and others are invited to avail themselves of this valuable service.

ASSOCIATED TILE MANUFACTURERS

BEAVER FALLS

PENNSYLVANIA

Alhambra Tile Co.
American Encaustic Tiling
Co., Ltd.
Beaver Falls Art Tile Co.
Cambridge Tile Mfg. Co.
Grueby Faience & Tile Co.
Matawan Tile Co.

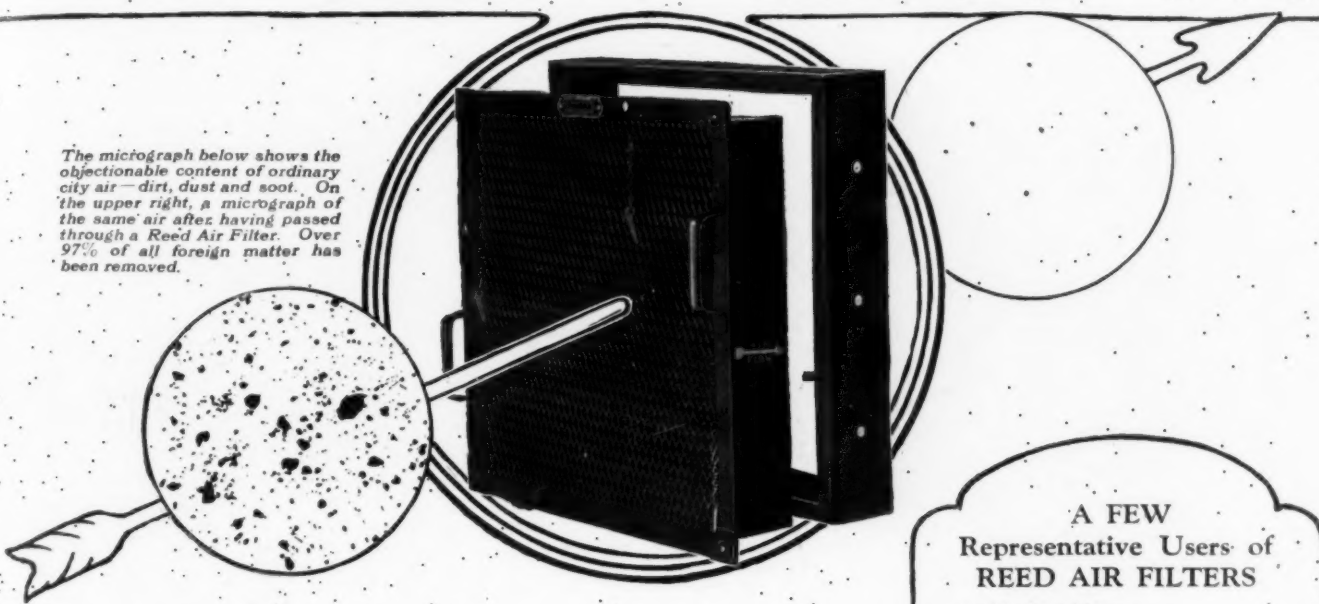
Producers
of
Beautiful TILES



Mosaic Tile Co.
National Tile Co.
Old Bridge Enameled Brick
& Tile Co.
Perth Amboy Tile Works
The C. Pardee Works
U. S. Encaustic Tile Works
Wheeling Tile Co.

R E E D A I R I S C L E A N A I R

The micrograph below shows the objectionable content of ordinary city air—dirt, dust and soot. On the upper right, a micrograph of the same air after having passed through a Reed Air Filter. Over 97% of all foreign matter has been removed.



Specifying the AIR for Your Buildings

PURE AIR is as important at all seasons as warm air during the winter months. That is why a continually growing number of architects are specifying Reed Air Filters for efficient, economical dust removal from the ventilating systems in every type of building.

In office buildings, schools, banks, factories—wherever dust is a menace to health, fine interiors or costly materials—Reed Air Filters will assure the maximum cleaning ability (97% guaranteed) at the lowest cost. Additional buildings in which Reed Air Filters have been installed are listed on the right. For convenience in obtaining further details, use the coupon.

REED AIR FILTER CO., Incorporated

224 Central Avenue, Louisville, Kentucky

Offices in Principal Cities

Reed Air

TRADE

filters **ALL
METAL**

MARK

A FEW Representative Users of REED AIR FILTERS

Public Buildings

ART INSTITUTE
Chicago
CITY ART MUSEUM
St. Louis
NEW YORK COUNTY COURT
HOUSE
New York City
CARNEGIE LIBRARY
Pittsburgh

Office Buildings

EQUITABLE BUILDING
New York City
STANDARD OIL BUILDING
New York City
PEOPLE'S GAS, LIGHT &
COKE CO. BLDG.
Chicago

Banks

LIBERTY TITLE TRUST CO.
Philadelphia
PRODUCE STATE BANK
Minneapolis
FEDERAL RESERVE BANKS
Louisville
Omaha
Denver
CORN EXCHANGE BANK
New York City

Hotels

EDGEWATER BEACH HOTEL
Chicago
HOTEL STATLER
Detroit
HOTEL TULLER
Detroit

Stores

CARSON, PIRIE, SCOTT & CO.
Chicago
THE FAIR
Chicago
SCHRAFFT'S
New York City
Boston
Syracuse
STRAWBRIDGE & CLOTHIER
Philadelphia

REED AIR FILTER CO., Incorporated
224 Central Avenue, Louisville, Kentucky
Send, without obligating me, bulletins: No.
106, The Reed System of Air Filtration; No.
107, Data, Tests and Specifications; No. 108,
Reed Air Filters, for General Ventilation.

Possible Use

Name

Address



An Interior of
ROOSEVELT SCHOOL
Dayton, Ohio

Messrs. Schenk & Williams
ARCHITECTS
Dayton Ohio

Suitability

Dayton's magnificent Roosevelt School is one of the many examples of the suitability and beauty of Appalachian Tennessee interior marble when used in school buildings.

Appalachian Tennessee for interior finish, floors and trim throughout is practical, worthy and genuinely economical.

The architect's good name can be safely intrusted to the lasting impression Appalachian Tennessee marble always makes upon the public.

Architects are invited to send their plans and specifications for accurate cost estimate of the interior marble work on any project in which they are interested.

APPALACHIAN MARBLE COMPANY

KNOXVILLE *Producers exclusively of Sincere Marble* TENNESSEE

Foreign Marble
also Architects will do well to
discuss with us our rare
ability to serve them well when
fine imported marbles are wanted.

"A truly remarkable publication"

The new Castle catalog will answer your sterilizing questions.

What kind of heat to use?

When is electricity preferable to steam or gas?

Is "direct steam" desirable?

Are "built-in" sterilizers advisable?

Should regulator and ejector valves be used?

How important are component parts?

What are the real principles of steam pressure sterilization?

When and how should containers be used?

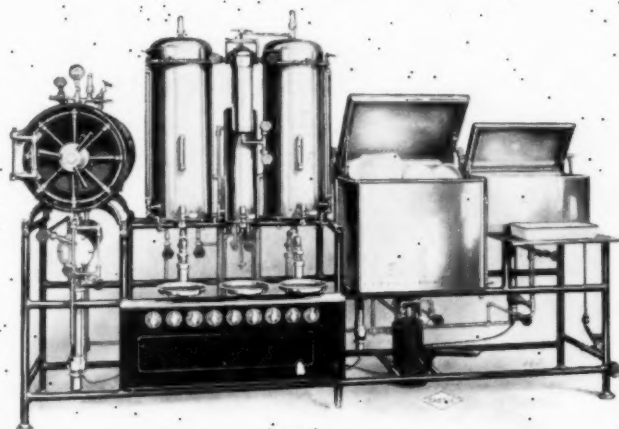
What are the problems in water, instrument and utensil sterilization?

What are the factors governing battery installation?

This CASTLE catalog (a 72 page book) is as new in its conception as in its printing. It branches out into new fields of service and deals with all phases of sterilizer installation in a manner never before available.

It gives engineering data and unbiased help and advice which are of inestimable value to hospital executives and architects, no matter what make of sterilizers are used.

It is an authoritative encyclopaedia instead of a mere listing of sterilizers spotted with paragraphs of strong praise. Send for a copy.



The Castle Book Shelf

The New Catalog Data Sheets

giving Castle sterilizer measurements and data with location of outlets.

Detailed Specifications

an accurate description of the best sterilizer construction.

Sterilizing Technique Series

Dressing Sterilization Rubber Gloves
Instrument Sterilization Water Sterilization
Utensil Sterilization

Which of these do you want? Have us send at least a catalog for reference.

CASTLE

Sterilizers for Hospitals, Physicians and Dentists
1209 University Avenue, Rochester, N. Y.



*Physicians' Building, Cincinnati, Ohio.
 F. H. K. & Co., Architects.
 Clark & Hummel Building Co., Contractors.
 Brixment Mortar used exclusively.*

BRIXMENT FOR PERFECT MORTAR

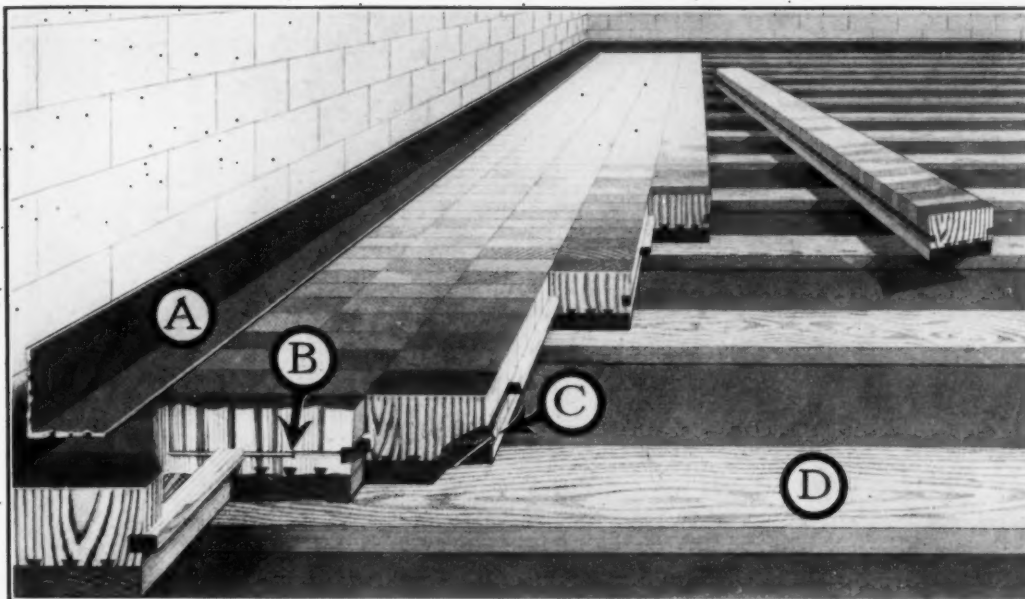


The architects who specify BRIXMENT exclusively for mortar are growing in number each day. They know that writing BRIXMENT into the specifications predetermines maximum and uniform strength, architectural charm and real economy. They know that BRIXMENT mortar is the one mortar that combines to such a high degree *all* the essentials of the best, most enduring masonry. BRIXMENT does not fade mortar colors, does not scale or pop and grows stronger with age. Especially adaptable to winter use. Interesting handbook and list of prominent BRIXMENT buildings on request.

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

B R I X M E N T

No dangerous Slivers



Bloxonend Flooring

for Gymnasiums, Drill Rooms, Auditoriums

A Angle iron covers expansion opening and serves as wall protector. Quarter Round or O. G. Mold may be used in lieu of angle iron.

B Bloxonend sections (approximating 8 ft. lengths) broken to illustrate lateral nailing. Provided with special nails in countersunk bores ready for driving.

C Bloxonend sections toe-nailed through base into floor strips. When toe-nailed, lateral nailing may be eliminated.

D Floor strips recommended only when maximum resilience required. Ordinarily Bloxonend is laid directly over concrete by lateral nailing without sleepers.

The method of laying Bloxonend in gymnasiums, illustrated above, is recommended to those requiring maximum resiliency. However, Bloxonend is inherently resilient and floors laid *directly over concrete* by lateral nailing are entirely satisfactory to many architects, physical directors and athletes now using them.

In addition to resiliency, Bloxonend gives you every other quality you want in a gymnasium floor. It is bright, clean, attractive, exceptionally durable and while smooth always, it affords a firm, safe foothold minimizing falls and accidents.

Being end grain, Bloxonend cannot sliver—a safeguard worth providing. Plates used in anchoring gymnasium equipment easily and satisfactorily inserted.

Specifications covering the use of Bloxonend in gymnasium and general industrial service furnished upon request

CARTER BLOXONEND FLOORING COMPANY

Kansas City, Missouri

CLEVELAND
1900 Euclid Avenue
NEW YORK
501 Fifth Avenue
BOSTON
910 Broad Exchange
Bldg.
ST. PAUL
1561 Sherburne Ave.

BLOXONEND

Lays Smooth **FLOORING** *Stays Smooth*

CHICAGO
332 So. Michigan Ave.
WASHINGTON, D.C.
700 Insurance Bldg.
DETROIT, MICH.
1st Nat'l. Bank Bldg.
SAN FRANCISCO
639 Howard St.



PARK AVENUE, NEW YORK — Looking northwest from Sixty-first Street

American Face Brick Leads the World

NOWHERE else as here in America have the color possibilities of brick for beautiful wall designs been so highly developed. Traveled foreigners are astonished and delighted with the results.

A correspondent of the *Manchester Guardian*, in an article entitled "The City of Wonderful Heights" (August 14, 1925) thus gives his impressions:

"Discriminating people had never told me that New York had so much beauty. The famous silhouette of New York did not impress me [possibly because I saw it first in a Scotch mist] so much as some individual buildings, notably the Shelton Hotel, and the gay, delicate handsomeness of Park Avenue and Lexington Avenue, with their charming brickwork. The newer the buildings the better in this happy city. The combinations of marble or Indiana stone and brick are usually simple and effective.



PARK AVENUE, NEW YORK
Looking southwest from Sixty-sixth Street

The American architects seem to have given themselves to the study of brick with characteristic closeness and intelligence, and everywhere one came on new signs of their mastery of the subject.

"Owing to the millions of bricks required for these vast buildings the architects and brick makers find it economically possible to co-operate to produce particular kinds of bricks, and as the bricks have no structural office in these steel-framed cages all sorts of devices can be used to give variety and quality to the surface; passages of slightly projecting bricks, bricks with the joints scraped out at the front leaving the brick edge open, and other devices for an enrichment by shadow of the huge brick surface. In many of the new buildings the influence seems to be Bologna, particularly in the intersecting arches forming a cornice and the use of projecting bricks. The addition of gargoyles, cartouches, and other



VANDERBILT AVENUE, NEW YORK
Looking northwest from Grand Central Station Viaduct

separate

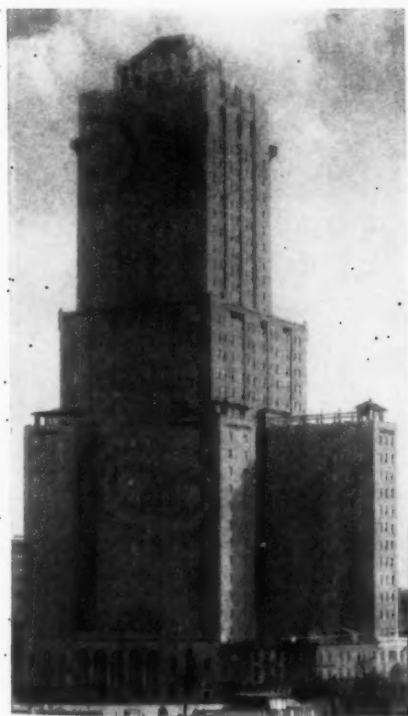
enrichments high up on the face of the building are usually in perfect scale, suggesting careful experiment with models.

"The brick varies in color from an unsuccessful lemon white to deep red, with some particularly fine oatmeal tints in the later buildings that take the sunlight with a radiant sweetness. One had the ridiculous fancy about the Americans that after a generation of breakfast-food eaters the oats were now coming out in their architecture. In the clear, gay atmosphere of Manhattan these oatmeal palaces are delightful, even lovely at times, as they take the glow. [Why should our own new Regent Street not have been of 'brick?']"

J. B.

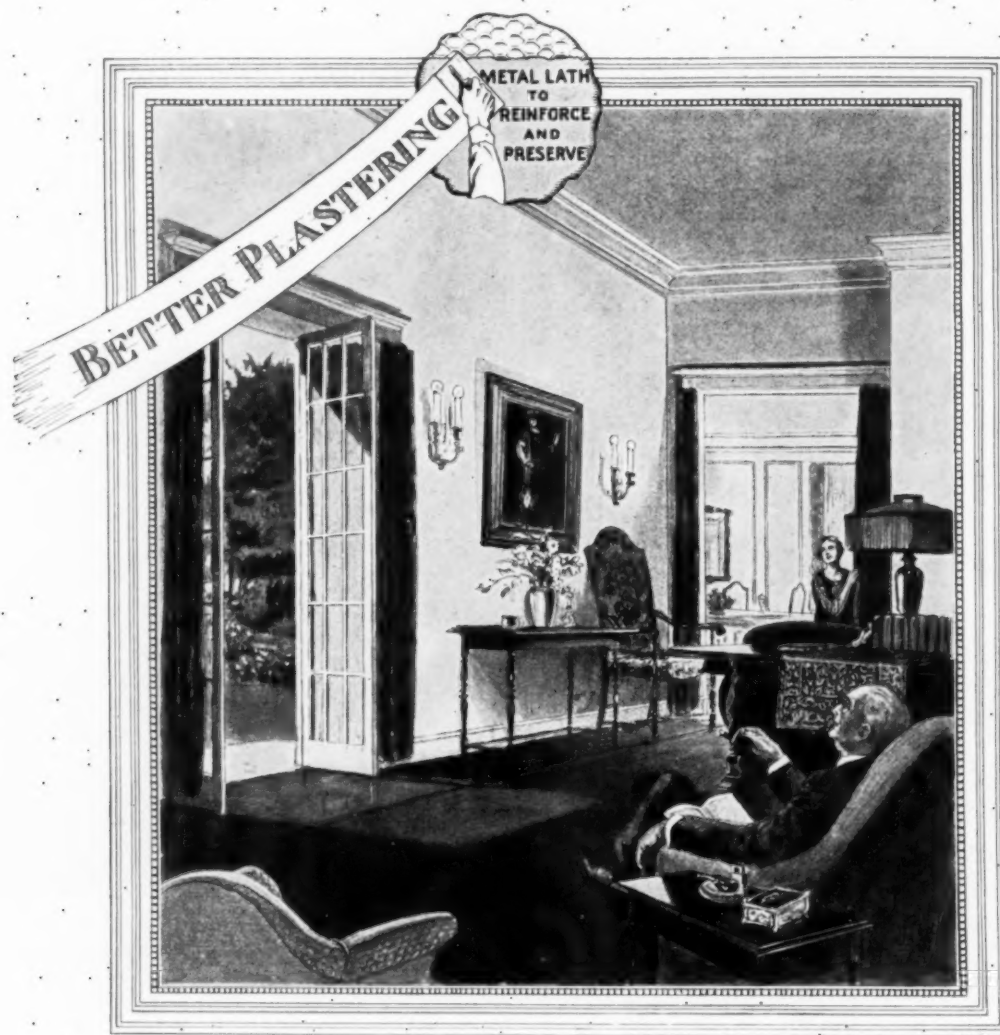
EUROPE can show many fine examples of brickwork but these in no way compare in the scope of color and texture with the varied product our manufacturers offer.

In fact so great is this range that it really presents a new material to the American architect who is thus challenged to develop to the fullest possibilities this wonderful structural and artistic material.



THE SHELTON HOTEL
Arthur Loomis Harmon, Architect

AMERICAN FACE BRICK ASSOCIATION
1751 Peoples Life Building • Chicago



For the 80 per cent that Shows

BY the walls and ceilings most homes are judged. Owner and visitor alike form opinions from the plastering. These surfaces represent 80% of the visible interior.

No other finish is so faithful as Better Plastering on its steel base—none so true in keeping faith with the architect whose art is expressed in the finished home.

For the 80% of the interior that is

exposed to the eye, specify Better Plastering on a metal base.

Call for bids for 3-coat plaster on 3 lb. METAL lath: [1] throughout the plastered parts of the building, [2] on all ceilings, [3] on the ceilings and in the corners of entry hall, living room and dining room; bath room wainscôt, and for fire protection over heating plant, and on the under side of the main stairway.

NATIONAL COUNCIL for BETTER PLASTERING

819 Madison Square Building
CHICAGO

BETTER PLASTERING

METAL LATH TO REINFORCE AND PRESERVE

For specification data, detail drawings and full information concerning styles, sizes and metals as related to hinges and butts, see SWEET'S ARCHITECTURAL CATALOGUE

Pages 1338 to 1355

For garage hardware, see Pages 1426 to 1431



*T. P. Barnett Co., Architects. Hume-Deal Co., Builders.
Hardware by Zuernheim Sales Agency.*

The doors of the
CITY CLUB BUILDING
Saint Louis, Missouri
are equipped with
McKINNEY HINGES

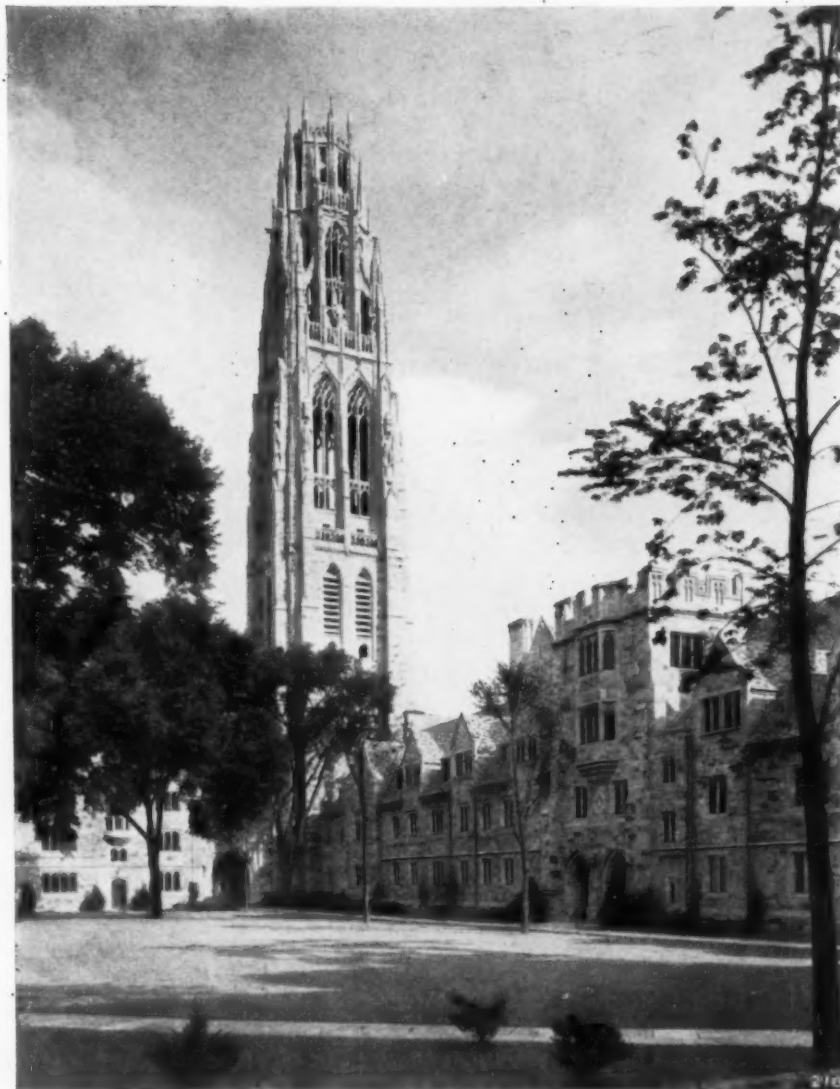
McKINNEY MANUFACTURING COMPANY
PITTSBURGH

McKINNEY MANUFACTURING COMPANY
PENNSYLVANIA



SARGENT

Locks & Hardware



Fully equipped with
Sargent Hardware

MEMORIAL QUADRANGLE, YALE UNIVERSITY.
New Haven, Conn.

James Gamble Rogers
Architect

MUCH more than a startlingly beautiful group of buildings has been created here . . . an atmosphere; a mellow charm . . . a livableness . . . a proper setting for scholastic life. Sargent locks and hardware of solid wear-resisting brass and bronze are part and parcel of the plan. Harmoniously beautiful. Permanently quiet, smooth-working and secure.

SARGENT & COMPANY, *Hardware Manufacturers*
NEW HAVEN, CONN.

New York: 94 Centre Street

Chicago: 221 W. Randolph Street

"Details to which Standard Hardware can be applied" are printed in our catalog. We have additional copies of these pages bound with cover for filing, which we shall be pleased to send to architects and architectural draftsmen upon request.



Residence of Frederick A. Shick, West Bethlehem, Pennsylvania. C. E. Schermerhorn, Philadelphia, Pa., Architect. Roofed with IMPERIAL Closed Shingle Tiles in Dull Green.

IF your client thinks IMPERIAL Roofing Tiles a luxury, remind him of their eventual economy. They reduce fire insurance premiums, make homes less expensive

to heat, and assure lasting freedom from repairs. Because they thus repay their cost, he actually pays nothing for the greater beauty and distinction of tiles.

IMPERIAL Roofing Tiles

LUDOWICI-CELADON COMPANY

104 South Michigan Avenue - Chicago
565 Fifth Avenue - New York



Now you can plan *fireproof* homes within reach of every owner

With Structolite—the improved structural Gypsum—architects are now able to design monolithic homes, thoroughly fireproof and wind-tight, *at a cost considerably less than that of any other masonry construction!*

This amazing economy of Structolite results from its low price, from its light weight (two-thirds that of Portland cement concrete) and from its 30- to 45-minute set. This last quality permits the walls and partitions to be poured speedily by alternating two courses of demountable forms.

Structolite, too, has the high heat-insulating properties that clients want. Compared to walls of equal thickness it has a heat-stop-

ping value $3\frac{1}{2}$ times that of ordinary cement concrete, and more than $2\frac{1}{2}$ times that of frame construction. It helps keep houses cool in summer and warm in winter—cuts down fuel bills.

Structolite lends itself perfectly to any architectural design. May be faced with stucco, brick or stone veneer, or wood siding. Special booklet presenting over 70 designs including the 28 Award Winners in the recent Structolite contest will be sent to those architects requesting it on their business stationery.

UNITED STATES GYPSUM COMPANY

General Offices

Dept. R. 205 West Monroe Street, Chicago, Illinois

STRUCTOLITE

The FIREPROOF Construction

U.S.
G

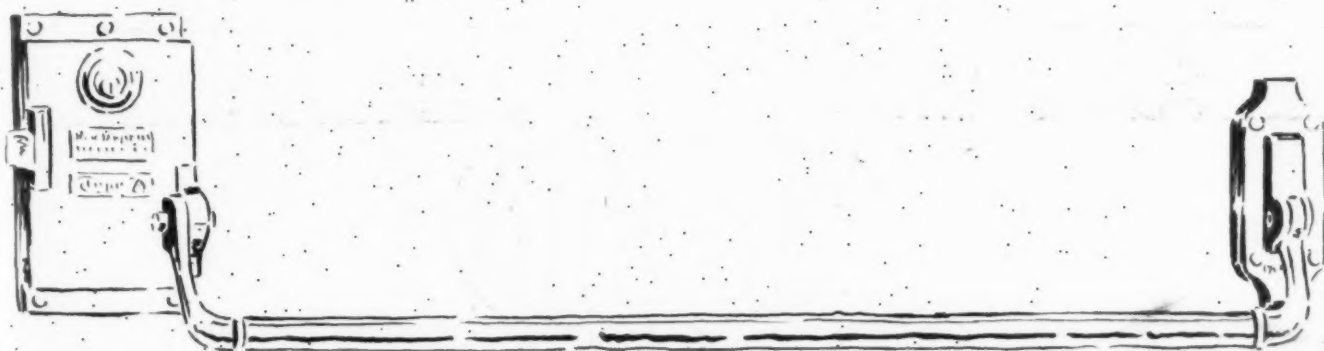
Von Duprin


TRADE MARK REG. U. S. PATENT OFFICE

Self-Releasing Fire Exit Latches

The maker's moral responsibility for any device on which human life may depend does not end with the sale, but endures through all the years the device is in service. That fact is constantly before us in making Von Duprin latches.

VONNEGUT
HARDWARE CO.
Indianapolis, Ind.



S the year of our
Seventy-sixth
Anniversary draws to
a close and the season
of the friendly greeting
approaches

Corbin extends Good Wishes
from Good Hardware
Headquarters

P. & F. CORBIN

Since 1849

New Britain Connecticut
The American Hardware Corporation, Successor
New York Chicago Philadelphia

Good Buildings Deserve Good Hardware



OFFICE PARTITIONS

MADE BY THE MILE
U. S. Reg. Pat. Off.
SOLD BY THE FOOT

Flexibility and Economy

WHEN office spaces are originally designed and divided with Mount and Robertson partitions, railings, counters, etc., the owner is insured against delay and enormous expense when an old tenant vacates his space and a new tenant moves in.

The new tenant will unquestionably require different office arrangement.

The space may be redesigned making use of the units which comprised the original layout. This operation may be completed quickly and economically when Mount and Robertson products are used.



MOUNT & ROBERTSON, Inc.

OFFICE ENGINEERS

62 Broad St.

Phone, Hanover 5727

New York

Established 1893



Forest Park School, Ft. Wayne, Ind.

Play Safe with— *Sanymetal*

MOST metal partitions look more or less alike. But they don't all wear alike. A dozen details of material, construction, assembly, and finish influence the "expectation of life" in your toilet or office partitions. Let us show you specifically how Sanymetal has achieved a notable excellence, not only in beauty of line and finish, but in those unseen qualities that mean everlasting stamina in a metal installation.



Sanymetal Products are: Partitions for toilets, showers, dressing rooms, urinals. Partitions for offices and factories. Metal doors, screens and wainscot. Sanymetal Gravity Roller Hinges for toilet doors. Write for latest Bulletins.

THE SANYMETAL PRODUCTS CO.
1702 Urbana Rd. Cleveland, O.

Sanymetal
TRADE MARK U.S. REG. Toilet and Office Partitions

Hamlinized SOUND-PROOF DOORS and FOLDING PARTITIONS

In planning Schools, Hospitals, Churches, Libraries, Theaters, and Demonstration Rooms, Architects all over the United States are specifying HAMLIN'S EVANSTON SOUND-PROOF DOORS AND PARTITIONS.

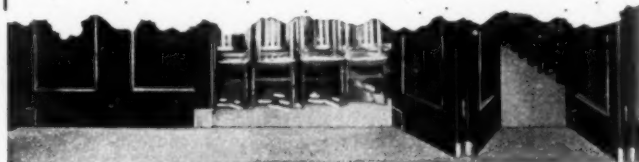
Hundreds of successful installations are proving the great advantages to be gained by using this exclusively patented method of Sound Insulation, in single rooms or series of rooms.

*There are installations close by.
Write for list and literature.*

IRVING HAMLIN

1506 Lincoln Street

Evanston, Ill.



Clinton Mortar Colors

Color the Mortar!

College and university buildings offer the architect a welcome atmosphere, background and tradition for achieving distinctive beauty in addition to mere utility.

The coloring of mortar joints is practical beyond question. And, with Clinton Mortar Colors, a harmony of color is attainable in the wall quite beyond the scope of an uncolored mortar joint.

The long recognized dependability, uniform coloring strength and permanence of Clinton Colors are responsible for their acceptance as standard by the profession generally.

*Technical suggestions and service
rendered by our Service Department.*

THE CLINTON METALLIC PAINT
COMPANY

17 Clinton Road

Clinton, N. Y.



Attractive Offices of Hauserman Steel Partitions

THE well balanced, businesslike appearance of this Hauserman Steel Partition installation is typical of this modern way of partitioning.

Not only do these *firesafe* partitions meet all architectural requirements of design but also offer many distinct advantages.

Hauserman Partitions give that much-needed flexibility in office arrangement and re-arrangement. They consist of standard units assembled both vertically and horizontally. These units are replaceable with others—such as steel with glass, or vice versa—or with doors of corresponding width. All units are easily handled by one man. Grills, wickets and ventilators may be installed wherever desired.

Thus, Hauserman Steel Partitions are not only attractive in appearance but “attractive” in the exceptional value they represent.

Whether for office, bank, factory or any other partition need—there's a type and grade of Hauserman Steel Partition to fill it with 100% satisfaction. This company makes a complete line of steel partitions. A portfolio of types and layouts will be gladly mailed you upon request.

THE E. F. HAUSERMAN COMPANY
6803 Grant Avenue CLEVELAND, OHIO

New York

Boston

Branch Offices:
Pittsburgh

Detroit

Chicago



Hauserman
HOLLOW STEEL STANDARD UNIT
PARTITIONS



Healthful Offices

FEW offices have all the light that tenants would like. Circle A Partitions (Sectional and Movable) allow the light from one room to pass into those adjoining it; they do not darken corridors or interior rooms. Electricity bills are cut down, eye-strain relieved, and fewer errors of reading are made.

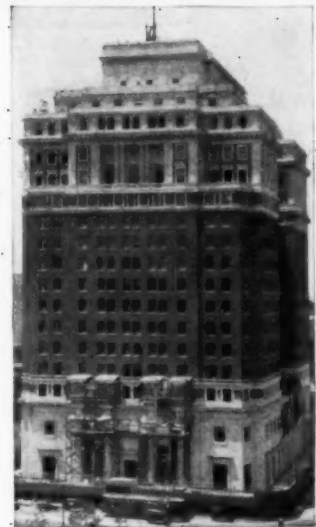
With seven-foot Circle A Partitions free ventilation is allowed throughout the floor. Where ceiling height partitions are used, as many transoms as desired may be inserted.

It is worthy of note that Circle A Partitions can be changed from seven-foot height to ceiling height or vice versa, without taking down the entire partition. The upper sections are easily movable in intact units.

Above are shown Circle A Partitions in the offices of the General Electric Company, Detroit; and at the right the Insurance Co. of North America Building, Philadelphia, where Circle A Partitions are standard equipment.

Send for the Circle A catalogue, showing construction, erection, plans and specifications, etc.

CIRCLE A PRODUCTS CORPORATION
650 South 25th Street
NEWCASTLE, INDIANA



TEAR off this coupon and send for complete illustrated catalogue, file size, showing details of construction, floor plans, etc.

CIRCLE  PARTITIONS
SECTIONAL AND MOVABLE

Russell Sage Dormitory, Dartmouth College, Hanover, N. H. 115 Columbia Shades and Rollers installed by Ward Baird and Langh-ton, Hanover, N. H.



Hard wear, little care— that's the window shade's lot!



Columbia window shade rollers are fitted with an especially strong spring and incorporate a brass bushing and nickel-plated fittings which are rust-proof. These and other exclusive features insure silent operation plus 30% to 40% longer life and a third greater lifting power.

Where excessive wear with little care is the rule, you find *Columbia* window shades and rollers standing up. In dormitory and classroom, lecture hall and laboratory, they may be run up and down a dozen times a day, year after year, and they keep right on working indefinitely.

But good window shades must be more than mechanically perfect—they must satisfy the demands for good lighting, made both by students and faculty. Shades are expected to prevent eye-strain and glare and still admit adequate light; to exclude daylight when a stereopticon is used or allow it to enter in just the right amount when close reading is required.

Columbia shades and rollers meet these conditions. They possess all the qualities which good shades must have. A wide

variety of colors provides for harmony with both interior and exterior, while roller fittings are made for every type of sash. You'll be sure of satisfied clients, if you specify *Columbia* shades and rollers for whatever types of buildings you are planning.

May we send samples of *Columbia* cloth and a specimen roller, together with the standard specifications for window shades? No obligation on your part, of course. Just use the coupon.

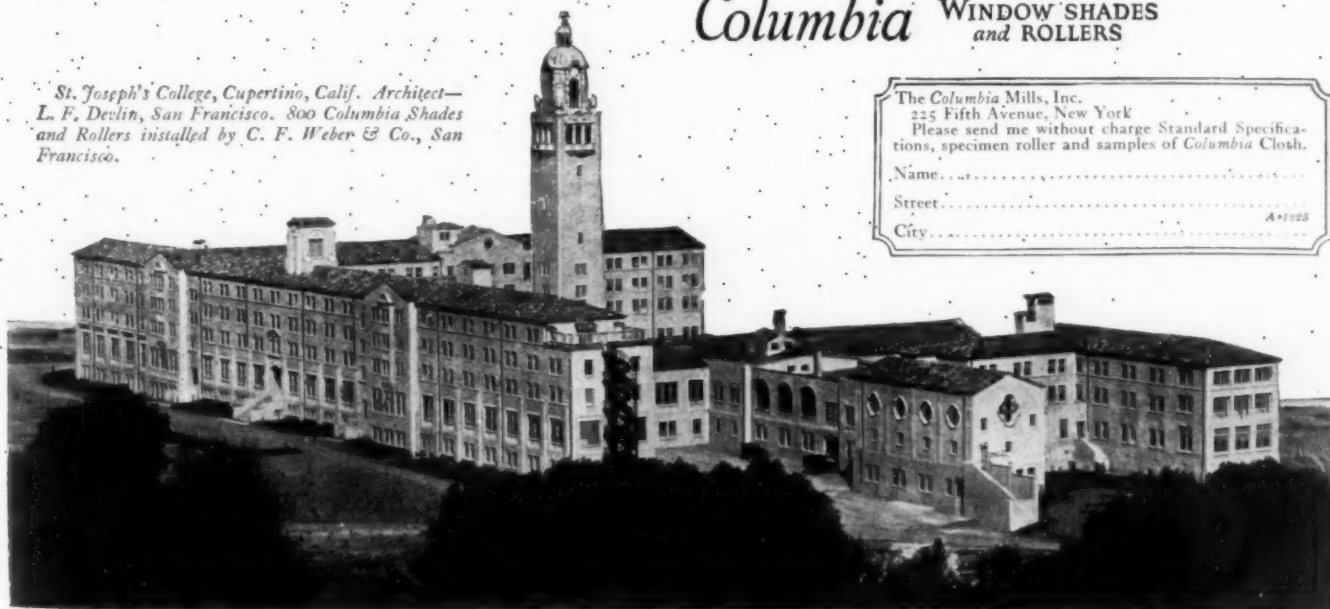
The *Columbia* Mills, Inc.

225 FIFTH AVENUE, NEW YORK

Boston Chicago Cincinnati Cleveland Detroit
Kansas City Minneapolis New Orleans Pittsburgh
Philadelphia Portland (Ore.) St. Louis Fresno
San Francisco Los Angeles

Columbia WINDOW SHADES and ROLLERS

St. Joseph's College, Cupertino, Calif. Architect—L. F. Devlin, San Francisco. 800 Columbia Shades and Rollers installed by C. F. Weber & Co., San Francisco.



The *Columbia* Mills, Inc.
225 Fifth Avenue, New York
Please send me without charge Standard Specifications, specimen roller and samples of *Columbia* Cloth.
Name.....
Street.....
City..... A-1025



ADDITION TO SAN JUAN HOTEL
Orlando, Fla.

W. L. STODDART
Architect

A FLORIDA HOTEL ERECTED BY
TURNER CONSTRUCTION COMPANY

Our representative in Florida is ready to render service to architects and owners contemplating building in that locality.

We are interested in erecting Office Buildings, Hospitals, Schools, Clubs, Hotels, Apartment Buildings, and quality work in Standard Brick and Steel Construction; also Reinforced Concrete Industrial Work.

TURNER CONSTRUCTION COMPANY

ATLANTA
BOSTON

PHILADELPHIA
NEW YORK

BUFFALO
CHICAGO

The ARCHITECTURAL FORUM

VOLUME XLIII

NUMBER 6

CONTENTS for DECEMBER 1925

PLATE ILLUSTRATIONS	Architect	Plate	LETTERPRESS	Author	Page
Gymnasium, North Carolina State College of Agriculture	Hobart B. Upjohn	89	Cover Design: Stoughton Hall, Harvard University		
Entrance, Gymnasium, University of Indiana	R. P. Daggett & Co.	90	From a Drawing by Louis C. Rosenberg		
Entrance, Men's Gymnasium, University of Illinois	James M. White and Charles A. Platt, Associated	91	The Editor's Forum		51
Entrance, Gymnasium, Smith College	J. W. Ames and Edwin Sherrill Dodge	92	Study for Gymnasium, Yale University		
Entrance, Gymnasium, Manhattan College	James W. O'Connor	93	From a Pencil Drawing by Otto R. Eggers	Frontispiece	
Dormitory, Columbia Theological Seminary	Wilson, Berryman & Kennedy	94	Educational Influence of Collegiate Architecture	A. D. F. Hamlin	321
Dormitory, Theological College for Lay Workers	Baskerville & Lambert	95	Planning of Dormitories	Robert McLaughlin	327
Scottish Rite Dormitory for Women, University of Texas	Herbert M. Greene Company	96	Planning of Gymnasiums	Aaron G. Alexander	333
Topliff Hall, Dartmouth College	Larson & Wells	97	Common Rooms and Dining Halls	Leigh French, Jr.	337
Russell Sage Hall, Dartmouth College	Larson & Wells and Office of John Russell Pope	98	College Y.M.C.A. and Religious Buildings	Rexford Newcomb	341
Lionel Hall, Harvard University	Coolidge, Shepley, Bulfinch & Abbott	99	Dormitory Designs by Day & Klauder	Matlack Price	347
West Residence Hall, University of Illinois	James M. White and Charles A. Platt, Associated	100	College Club and Fraternity Buildings	Mary A. Rolfe	353
Group of Dormitories, Princeton University	Zantlinger, Borie & Medary	101	S. K. Club House, Harvard University	Coolidge & Shepley	361
Dormitories, Smith College	J. W. Ames, K. S. Putnam and E. S. Dodge	102	Sigma Nu House, Dartmouth College	Larson & Wells	363
Colonial House, Connecticut College for Women	Herbert R. Loud	103	Phi Delta Theta House, University of Illinois	Howard VanDoren Shaw	365
Students' Residence, University of Saskatchewan	David R. Brown and Hugh Vallance	104	Alpha Delta Phi House, University of Illinois	Ralph W. Varney	367
			Iroquois Club House, Harvard University	Warren & Wetmore	369
			Kappa Kappa Kappa House, Dartmouth College	Larson & Wells	371
			D. U. Club House, Harvard University	R. Clipston Sturgis	373
			Delta Tau Delta House, Dartmouth College	Blackall, Clapp & Whittemore	375
			Designing and Planning of Stadiums	Mary A. Rolfe	377
			"Efficiency" Dormitories	C. Stanley Taylor	383

PARKER MORSE HOOPER, Editor

Published Monthly by
ROGERS & MANSON COMPANY

383 Madison Avenue, New York

Howard Myers, Pres.; C. Stanley Taylor, James A. Rice, Vice-Pres.; Robert Sweet, Sec. and Treas.
Yearly Subscription Payable in Advance, U.S.A., Insular Possessions and Cuba, \$6.00. Canada, \$6.75. Foreign Countries in the Postal Union, \$7.50.

Single Copies, 60 cents. All Copies Mailed Flat.

Trade Supplied by American News Company and its Branches, Entered as Second Class Matter at the Post Office at New York, N. Y.

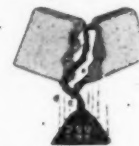
Copyright, 1925, by Rogers & Manson Company



Res. of James Gilmore, Esq., Reg. Arch. Cincinnati, Ohio, Bishopric Ivory Cream Stucco over Bishopric Base on all exteriors.

Stucco walls of greater strength

Ordinary Stucco



Bishopric Stucco



The enormous tensile strength of Bishopric Stucco is illustrated here. This is just one of the Bishopric guarantees of permanence on the wall.

How Bishopric provides lasting beauty and protection

Rare beauty of shade and texture, with permanent protection from the elements are exclusive Bishopric qualities that are being appreciated more and more by those interested in home-building. BISHOPRIC is a super-stucco with greatly increased strength, thus providing durability and protection so vital to every building, whether it be large or small. In Bishopric only can be obtained the wide variety of beautiful shades and textures now demanded by those who appreciate the best. With Bishopric, beauty and protection go hand in hand.

Tensile strength tests show BISHOPRIC far superior to other stuccoes.

BISHOPRIC is fireproof, magnesite rock used is the same as that used to line furnaces and smelters — Tremendous heat has no effect on it.

BISHOPRIC is thoroughly water-proofed by a secret process shutting out moisture, cold, heat, wind and vermin.

BISHOPRIC-Insulation Qualities are practically perfect, retarding heat and cold, eliminating objectionable noises.

BISHOPRIC requires no painting or renewing — A wall built to stand for generations.

In mansion or bungalow, Bishopric Stucco has a place, whether laid over stately lines or designed after those quaint cottage effects, now so popular.

Bishopric Stucco endures in every climate, retaining its strength and its original color in temperatures of either extreme. Economical in original cost, negligible in upkeep, warm in winter and cool in summer, BISHOPRIC STUCCO over BISHOPRIC BASE not only wins friends but keeps them. And no wonder, for it yields itself to any form and endures from generation unto generation.

An interesting booklet "Bishopric For All Time and Climate," illustrated with photographs of beautiful houses built with Bishopric Stucco, plaster and sheathing units will be mailed you Free.

Bishopric is Sold by Dealers Everywhere

The BISHOPRIC MANUFACTURING CO.

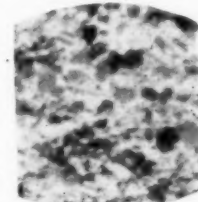
100 ESTE AVE. CINCINNATI, OHIO

NEW YORK CITY CINCINNATI OTTAWA, CANADA

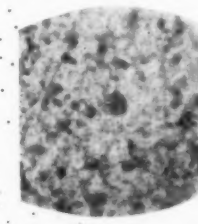
LOS ANGELES

LOS ANGELES

Ordinary Stucco



The average stucco being marketed today is extremely porous and therefore NOT WATER-PROOF. Notice the spongy porous formation in this enlargement and compare the density of Bishopric shown below.



Bishopric Stucco

BISHOPRIC STUCCO *over* BISHOPRIC BASE

"A Complete Wall Unit for all Time and Climate"

KENSINGTON FURNITURE

AWARDED GOLD MEDAL OF HONOR IN NATIVE INDUSTRIAL ART
39TH ANNUAL EXHIBITION ARCHITECTURAL LEAGUE OF NEW YORK



A Wall in the Showrooms

ITALIAN RENAISSANCE WALNUT FURNITURE, by Kensington

THE Renaissance in Italy, which quickened so marvelously the artistic life of all Europe, witnessed the most perfect blending of art and craftsmanship the world has seen. It was an age when the artist was a craftsman and the craftsman an artist. Everything that came from the hand of man was touched with beauty.

Furniture of the period is characterized by a perfect balance of proportions and scholarly rendering of classic detail that give it an unsurpassed dignity and make it especially suitable for rooms of a somewhat formal character.

In Kensington reproductions, from such collections as the Davanzati and Bardini, the old-time hand processes of the Kensington craftsmen retain the individuality, character and decorative quality of the originals.

Kensington Furniture is made in all the decorative styles appropriate for American homes.

Architects interested in completing the interiors they design with furnishings harmonious in both character and quality are cordially invited to avail themselves of the service of the Kensington Showrooms and staff.

Illustrated Booklet F sent on request

WORK SHOPS
EAST END AVENUE
79TH STREET


KENSINGTON MFG. COMPANY
MANUFACTURERS AND IMPORTERS
DECORATIVE FURNITURE ~ ART OBJECTS
NEW YORK

SHOWROOMS
41 WEST 45TH STREET
6TH FLOOR

ANTIQUE BOISERIE AT CARLHIAN'S



© 1925

The Above Oak Regence Panelling—at Present on View in New York—Was Removed From an Old House in Dijon and is Suitable for a Library or Dining Room. We Hold the Largest Stock of Old French Boiseries in Paris.

Paris
6 bis. Avenue Kléber

CARLHIAN OF PARIS, INC.
SPECIALISTS IN FRENCH INTERIORS

New York
598 Madison Avenue



For out-of-the-ordinary effects—

Whenever the aim is to escape from the commonplace sameness of ordinary floors, the architect can turn to *Gold Seal Treadlite Tile*. The design and color of a floor of this artistic cork-composition material; laid tile by tile, can be brought into complete harmony with almost any architectural plan.

Treadlite floors have even more than their recognized beauty and suitability to recommend them. They have the practical advantages of comfort underfoot, quietness and assured durability.

Evidence of this durability is our Surety Bond against repair expense, issued by the U. S. Fidelity & Guaranty Co. The Bond is obtainable with any floor of *Gold Seal Treadlite Tile* installed according to Bonded Floors specifications.

BONDED FLOORS CO., INC.

New York Boston Philadelphia Cleveland Detroit
Chicago San Francisco

BONDED FLOORS

Resilient Floors  *for Every Need*



Entrance Lobby of the
Book-Cadillac Hotel,
Detroit, finished in
American Walnut.

Book-Cadillac Hotel, Detroit



The Finest Clubs, The Most Luxurious Hotels,
The Handsomest Banks and Offices are done in

American Walnut

THE visitor to the most luxurious modern hotels is impressed with the fact that American Walnut has practically supplanted all other woods for interior trim and decorations. The same holds true of other public, or semi-public buildings, such as clubs, banks and offices of the better type.

This preference is a practical recognition of the extraordinary qualities of this fine cabinet wood: The beauty and variety of walnut, with its

glowing natural color and its infinity of pattern and design, will always recommend it to the lovers of beautiful things. But beauty is only one of the many qualities of this wood. It has other practical merits.

For centuries walnut has been regarded as the most enduring of cabinet woods. From the middle ages, when the great renaissance in furniture-making developed master craftsmen whose work is today the boast of great art museums, walnut was recognized for its enduring qualities. Today, these marvelously wrought pieces, made centuries ago, retain all their beauty, all the freshness of elaborate carvings, all the mellow tones and coloring which characterized the wood when first turned out of the hands of the artists who made these imperishable treasures of art.

So when a great hotel, like the Book-Cadillac of Detroit, reveals many interiors exquisitely fashioned in walnut, the qualities of walnut receive a new understanding and appreciation. Walnut is famed for its strength, its lasting color, its ability to resist climatic changes and its easy working. It glows under any natural finish and is easy and inexpensive of upkeep. Always it adds to the room it decorates a luxurious charm that is unequalled.

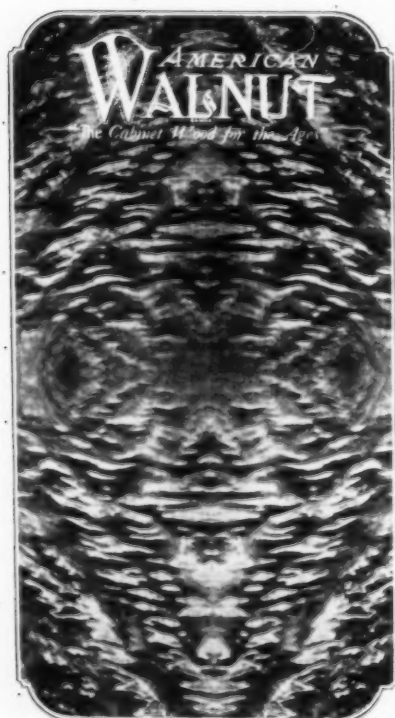
Our book, "The Story of American Walnut," gives you an interesting survey of the history of this fine wood, its uses through the ages, its advantages and many superiorities. You'll find it a valuable addition to your library. A copy will be mailed postpaid on request. Also we will send on request our Notes on Walnut Specifications, helpful in figuring walnut trim, floors, etc.

"This Is The Walnut Age"

AMERICAN WALNUT MANUFACTURERS' ASSOCIATION

Room 1000, 616 South Michigan Avenue

Chicago, Illinois



Finely matched panel of ripple stump walnut



Large leaves of glistening metallic threads enhanced by the luminous splendor of rayon unite in a design of simple grandeur

A SUPERB



You will enjoy seeing in our New York showrooms this modern room, designed and executed in Paris

BROCADE

WITH THE IMPERIOUS SIMPLICITY OF L'ART MODERNE

IN the bright, hard green of jade, glistening with the lustre of rayon and shining threads of gold, this design superbly combines grandeur and simplicity.

From edge to edge the brilliant pattern of broad interlacing leaves all but covers the jet-black ground. Sweeping in lines, bold in conception, it is so beautifully proportioned and balanced that it can be used successfully in the decoration of large rooms or small.

Paul Follot himself—one of the masters of L'Art Moderne—created this design. Perhaps you remember it at the Paris Exposition of Decorative Arts as a frieze in one of the rooms of "A Modern Embassy." Or saw it with other fabrics now in the collection of F. Schumacher

and Company in the Roubaix-Tourcoing pavilion?

The reserve of line, the conscious simplification, characteristic of these new designs, are both soothing and refreshing.

Dealers and decorators will also find at Schumacher's many distinguished fabrics, in the manner of the great decorative periods of the past—tapestries, damasks, velvets, prints—all with the authentic beauty of Old World pieces from which our designers drew inspiration.

Booklet explaining the value of decorating service

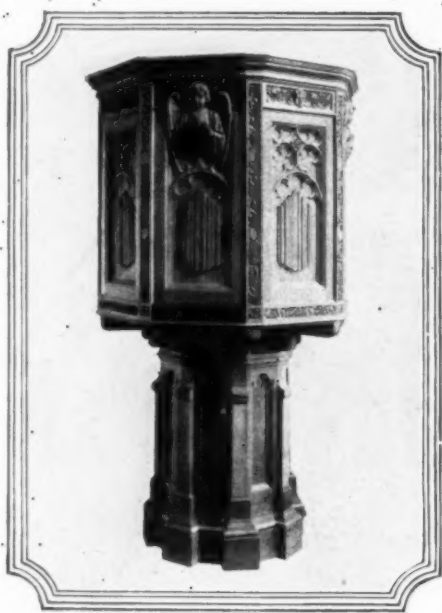
There are many people who have never availed themselves of a decorative service although their annual expenditure for

furnishings well warrants their seeking this expert advice. That they do not use it is due principally to their lack of understanding of how the decorator functions.

To explain to them the value and true economy of enlisting professional aid, we have prepared an interesting booklet beautifully illustrated in color. This booklet is also being mailed to all decorators and upholsterers.

If you have not already received a copy, please write us. F. Schumacher & Co., Dept. C-21, 60 West 40th Street, New York. Importers, Manufacturers and Distributors to the Trade only, of Decorative Drapery and Upholstery fabrics. Offices also in Boston, Philadelphia, Chicago and Paris.

F-SCHUMACHER & CO.



Pulpit Sacred Heart Seminary
Detroit, Michigan
Donaldson & Meier, Architects

Power to Serve

AMERICAN SEATING COMPANY'S power to serve in a thoroughly efficient and satisfactory manner the country's public seating needs has been built on the four-square foundation of:

Extensive manufacturing resources, the largest in its line in the world.

High achievement of efficiency in the production of a quality product.

Many years of experience in serving the country's largest users of seating.

An organization imbued—individually and collectively—with the Will to Serve.

American Seating Company

NEW YORK 620-119 W. 40th St.	General Offices 1094 Lytton Bldg. CHICAGO	BOSTON 79 Canal Street
---------------------------------	---	---------------------------



KENT-COSTIKYAN

FOUNDED 1886

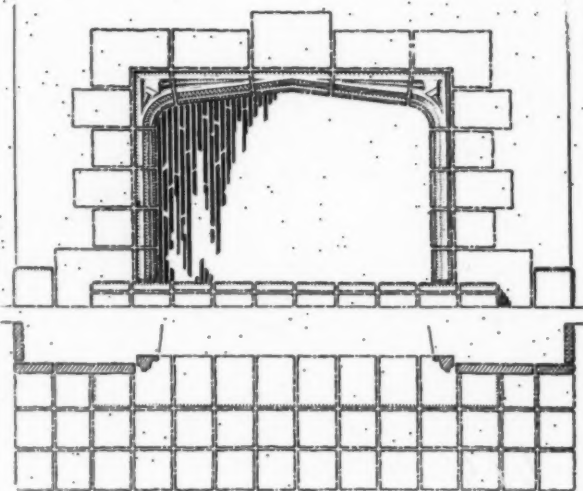
485 FIFTH AVENUE—SIXTH FLOOR
NEW YORK

Opposite Public Library

IMPORTERS OF ANTIQUE AND MODERN RUGS
FROM PERSIA, INDIA AND THE FAR EAST

SEAMLESS CARPETS IN SOLID COLORS
RUGS WOVEN TO ORDER IN ORIENT

Stock List "F" sent on request



ROOKWOOD

Tiles meet every architectural and artistic requirement. Call upon your dealer or write us for our new color chart and revised price lists of our Faience Tile.

THE ROOKWOOD POTTERY COMPANY

Architectural Dept., Cincinnati, Ohio



HAREWOOD HOUSE, the handsome Georgian seat of Princess Mary's father-in-law, is another example of the artistic use of Far Eastern wallpapers. The large bedroom illustrated above is decorated with such a paper which blends well with the oak and walnut furniture in several period styles. The "millecerfs" motive is treated as a symbol of calm and gentleness by the Buddhists who believe that the Buddha was born eleven times as a deer. It is also a symbol of longevity.

WALLPAPER

MANUFACTURERS ASSOCIATION
of the United States
461 EIGHTH AVE., NEW YORK, N.Y.

WRITE TO OUR INTERIOR DECORATION SERVICE BUREAU FOR PRACTICAL CO-OPERATION IN SUPPLYING ARCHITECTS
SAMPLES OF WALLPAPER AND OTHER AIDS TO THE SOLUTION OF SPECIFIC PROBLEMS IN THE DECORATION OF WALLS.



H. Douglas Curry & Co.



VERY FINE LARGE, CARVED OAK COFFER OF THE EARLY 17th CENTURY

33 EAST 57TH STREET

NEW YORK

FRENCH'S FLAT FINISH

"The True Flat Paint."

Will not flake or peel.

Write us for detailed
information.

Samuel H. French & Co.

Paint and Varnish
Manufacturers

PHILADELPHIA

CAMDEN

Established 1844

Incorporated 1920

How you can be sure
they are
Ferrocraft Grilles



Look in the
corners for the
above brass
identifying
plate.

It's your pro-
tection against
substitutions.

Tuttle & Bailey Mfg. Co.

New York

Chicago

The MURPHY IN-A-DOR-BED

NEW BAKER HOTEL

Dallas, Texas

Opened October Ninth

Preston J. Bradshaw, Architect

THE installation of over a hundred Murphy full size and twin beds in the fine, new, 700 room Baker Hotel at Dallas, Texas, is just another endorsement of Murphy quality and value. Their comfort and convenience are as highly appreciated by the guests as the economy in floor space which Murphy In-A-Dor Beds make possible to the owner.

Hotels and apartments designed and built around the Murphy idea are conceded by the country's leading architects, builders and owners, to be the highest development of the concealed bed principle. Added sleeping accommodations with greater income from rentals of rooms primarily designed for day time uses are accomplished through Murphy In-A-Dor Bed Installations.

**Let Our Technical Service Department
Help You — No Obligation**

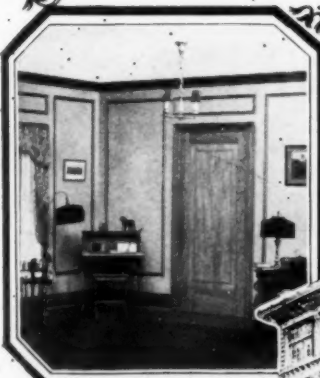
An experienced technical department is maintained by us for the benefit of architects, builders and owners at each Murphy office. They are always ready with suggestions that will help you conserve space. Let them show how to make revenue-increasing Murphy In-A-Dor Bed installations.

THE MURPHY DOOR BED COMPANY

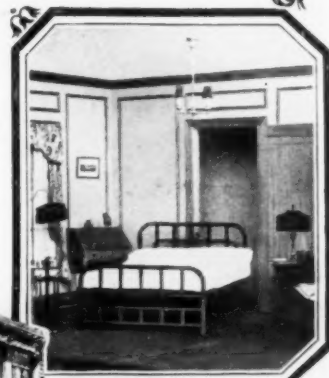
Address Nearest Office

Chicago, Ill. 22 W. Monroe St.
St. Louis, Mo. 315 N. 10th St.
Detroit, Mich. 7th Flr., Kresge Bldg.
Birmingham, Ala. 513 N. 21st St.
Cleveland, O. 1140-42 Hanna Bldg.
Kansas City, Mo. 1114 Grand Ave.
Dallas, Texas 1919 Pacific Ave.
El Paso, Texas Neff-Stiles Bldg.
Houston, Texas 2301 Main St.
New Orleans, La. 319 Dryades St.

New York City 18 W. 44th St.
Atlanta, Ga. 33 Luckie St.
Seattle, Wash. Terminal Sales Bldg.
San Francisco, Calif. Crocker Bldg.
Los Angeles, Calif. 1807 S. Main St.
Denver, Colo. 1534 Blake St.
Ottawa, Can. 205 O'Connor St.
Montreal, Can. 153 Peel St.
St. Petersburg, Fla. 225 Second Ave. S.
Miami, Fla. 234 Columbia Bldg.



A living room, sample room or parlor by day with no indication of the concealed sleeping accommodations.



A comfortable bed room at night by swinging the Murphy In-A-Dor Bed out from behind an ordinary door.

Mr. T. B. Baker, President and Manager of the Baker Hotel says the Murphy In-A-Dor Bed is the best for the money in America. This statement, to the thousands of hotel men who know his ability, is considerable of a recommendation for the Murphy.

Murphy In-A-Dor Beds have been installed in thousands of America's finest hotels and apartment hotels among which are The Pennsylvania Hotel Apartments, The Whittier, The McAlpin, The Windermere East, Hotels Statler and The Morrison Hotel.

There is Only One In-A-Dor Bed "THE MURPHY"



UNION COLLEGE CHAPEL
Schenectady, N. Y.
McKim, Mead & White, Architects

COLLEGE CHAPELS
require seating built to
specifications that provide
for hard usage.

We have made the tests
and can advise with
certainty.

De Long Furniture Company

Specialists in designing and manufacturing of special cabinet work and seating for Churches, Colleges, Lodge and Public Buildings.

Sales Office—1505 Race Street,
Philadelphia, Pa.

Factory
Topton, Pa.

Main Office
Allentown, Pa.

VENUS PENCILS

Guaranteed true to grade

FOR twenty five years the VENUS guarantee—that every pencil must be absolutely true to its grade—has offered the technical user the strongest protection in the pencil field.

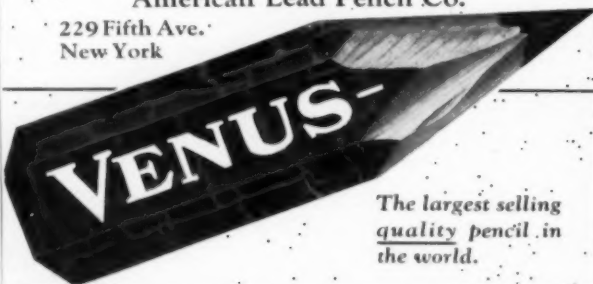
VENUS grading is so uniform that an unfinished drawing could be completed years later without the slightest alteration in the character or quality of a single line!

Plain Ends (17 degrees), per doz. \$1.00
Rubber Ends (14 degrees), per doz. \$1.20

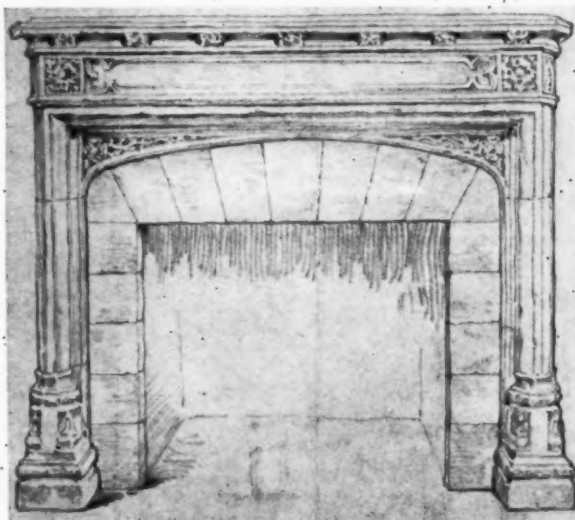
At Stationers and Stores the world over

American Lead Pencil Co.

229 Fifth Ave.
New York



The largest selling
quality pencil in
the world.



Old English Mantel in Art Travertine Stone

Jacobson Mantel & Ornament
Company

ARTIFICIAL STONE MANTELS

322-4 East 44th Street, New York

ALSO COMPOSITION ORNAMENTS FOR WOODWORK

LOUIS GEIB

ARTHUR P. WINDOLPH

"61" FLOOR VARNISH



Painted by Walter Biggs. Copyright 1925, P & L.

*Accidents become incidents
when floors are finished with "61" Floor Varnish*

Where floors are finished with "61" Floor Varnish, accidents not only become incidents but floor cares almost cease to exist. No attention is necessary for years, other than ordinary cleaning.

"61" Floor Varnish is so durable, tough, elastic and resistant to abrasion that the dropping of heavy articles, the moving of furniture and the pounding of countless heels do not mar its smooth, beautiful luster.

That is why we say, "Test it with a hammer—you may dent the wood but the varnish won't crack."

As for being waterproof—"61" is so resistant to water and other liquids, hot or cold, that for years, little mention has been made of this inherent

characteristic. "61" Floor Varnish will *not* turn white and the old-fashioned woman who wants to be sure the floor is *clean*, may if she wishes, scrub it with soap and water to her heart's content.

"61" is designed to wear on floors, and it is reasonable to regard *wear* as the all-important characteristic rather than any stunt waterproof test.

"61" Floor Varnish, *Dull Finish*, applied over two coats of the Gloss, gives the effect of a rubbed surface—is waterproof and durable, and is in great favor with architects, painters and home owners where a dull finish is required on floors or woodwork. *Let the Pratt & Lambert Architectural Service Department solve your finishing problems.*

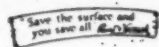


*You may
dent the
wood but
the varnish
won't crack*

PRATT & LAMBERT-INC., 122 Tonawanda Street, Buffalo, N.Y.

In Canada: 34 Courtwright St., Bridgeburg, Ontario

PRATT & LAMBERT VARNISH PRODUCTS



DISTINCTIVE WALL EFFECTS

The Shaded Tiffany Finish



After the selected ground coat is dry, a coat of Dutch Boy flatting oil is applied. While the flatting oil is still wet, the glazing colors are put on in spots. The spots should vary from small, widely spaced ones at the top to larger, more closely spaced ones at the bottom as shown.



With a circular motion the spots of glazing colors are blended together by means of a ball of cheesecloth. The colors are wiped out entirely in a few places to permit portions of the ground coat to show through. Then the work is finished by tamping with a ball of cheesecloth.



Eighth of a series showing how various wall effects are obtained with Dutch Boy white-lead and Dutch Boy flatting oil.

by M. REA PAUL, *Consulting Colorist*

AN exquisite harmonizing and gradation of coloring are found in the shaded Tiffany finish. It differs from the plain Tiffany finish in that it is gradually shaded from dark coloring at the base to the lighter first coat at the top.

The shaded Tiffany is especially well suited for use in low-ceiling interiors as a means of giving the appearance of increased height. It may be used to advantage in the hotel grill, lobby or corridor; in the assembly room of the school or for the larger low-ceiling rooms in the home. The glazing colors selected for use may be so blended as

to produce a soft, unobtrusive, but decidedly interesting effect.

Write for Free Samples

If you will write our nearest branch, we shall be glad to send you actual painted samples of the shaded Tiffany finish and any or all of the other seven finishes described in this series on Distinctive Wall Effects.

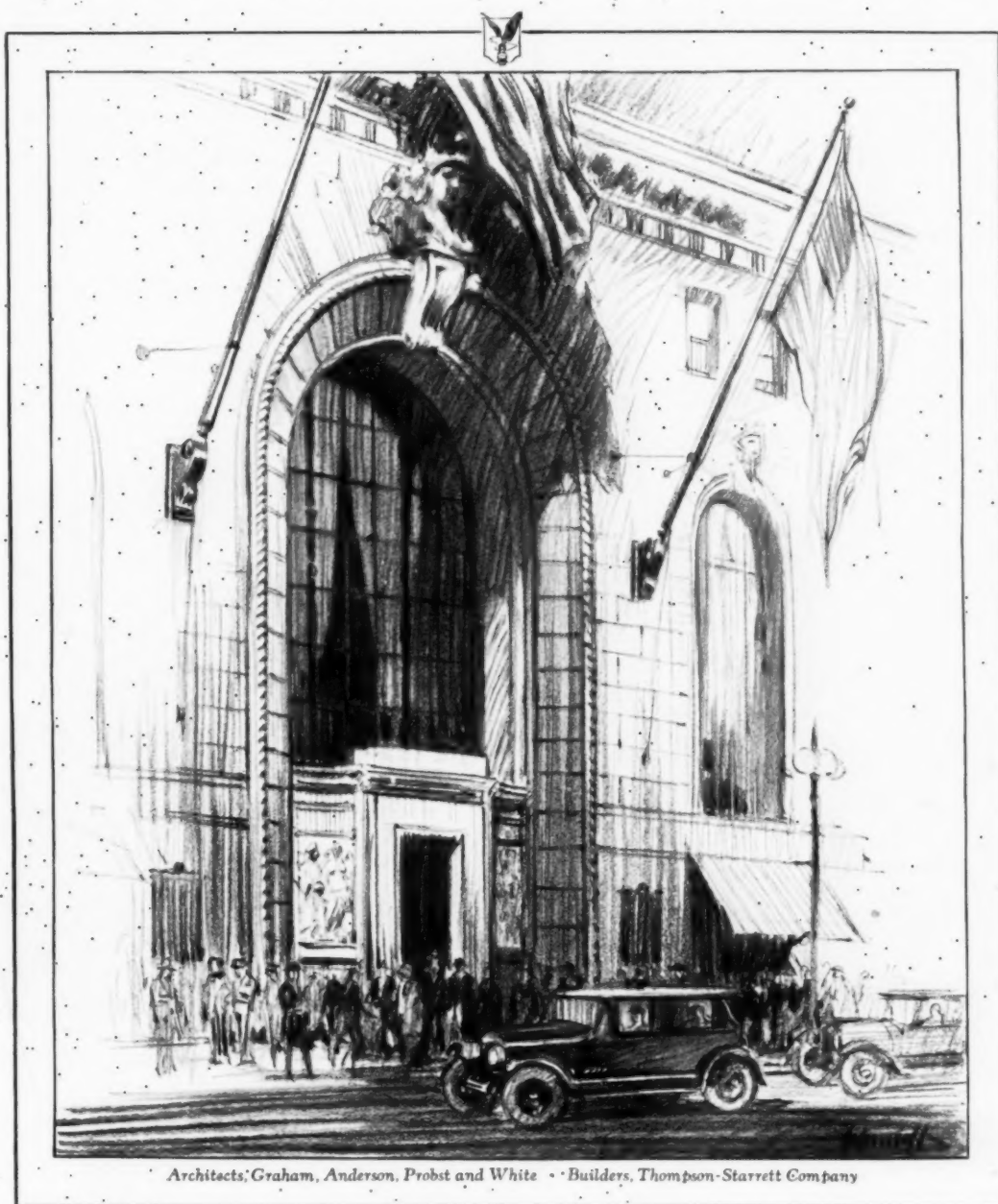
We also offer you without charge the help of our Department of Decoration. Color specialists will assist you in seeing that you secure the decorative treatments you have in mind.

They will help select the schemes of treatment, submit for your approval color suggestions and color renderings and, if you wish, assist in the writing of your specifications. For this service, simply address the Department of Decoration in care of our nearest branch.



NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 131 State Street; Buffalo, 116 Oak Street; Chicago, 900 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 722 Chestnut Street; San Francisco, 485 California Street; Pittsburgh, National Lead & Oil Co. of Penna., 316 Fourth Avenue; Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street.



Painting the Straus Building with EAGLE

THE Straus Building, at Michigan Avenue and Jackson Boulevard, is one of Chicago's latest contributions to the architectural beauty of America. It marks an interesting adaptation of Florentine design to the needs of modern business.

Eagle White Lead in Oil was used by the National Decorating Service for the painting of the Straus Build-

ing, because Eagle is known to combine the qualities of maximum protection and great beauty. Since 1843 Eagle White Lead, Pure Old Dutch Process, has been the choice of good painters everywhere.

Eagle White Lead is one of many lead and allied products made by The Eagle-Picher Lead Company, 208 South La Salle Street, Chicago



EAGLE *White* LEAD

PURE OLD DUTCH PROCESS

Sales Offices: CINCINNATI, CLEVELAND, PITTSBURGH, PHILADELPHIA, NEW YORK, MINNEAPOLIS, BOSTON, BUFFALO, DETROIT, BALTIMORE, NEW ORLEANS, KANSAS CITY, ST. LOUIS, JOPLIN
Manufacturing Plants: CINCINNATI, NEWARK, GALENA, KAS., HENRYETTA, OKLA., PICHER, OKLA., CHICAGO, EAST ST. LOUIS, ILL., ARGO, ILL., JOPLIN, MO., HILLSBORO, ILL., ONTARIO, OKLA.





TO complete the architectural achievement of a beautiful stairway, a finish must be used that will enhance the graceful lines and accentuate the artistic setting that will provide lasting, durable beauty for the handiwork of the master craftsmen who built it.

And commonly the search for such a finish ends with the choice of Ripolin—echoing the judgment of those European architects who for nearly forty years have used Ripolin as a matter of course whenever a fine finish was essential.

RIPOLIN

THE ORIGINAL HOLLAND ENAMEL PAINT

for Stairways Outside

for Stairways Inside

AND Ripolin, the original Holland enamel paint, has been selected by architects in America for more than twenty years for exterior trim decoration. Its impervious texture, its lasting whiteness, have been its artistic recommendations. But it covers generously, and its long life adds just so much more to its economy.

Wherever a fine finish must be used—wherever wear and weather must not mar—there Ripolin shows why its international fame is well earned and constantly increasing. Naturally, architects are foremost in specifying Ripolin because of these rare qualities.



The **GLIDDEN** Companies
PAINTS—VARNISHES—LACQUERS—ENAMELS

In our fourteen plants there are 1,092 paint-grinding and mixing machines, with nearly 3,000,000-gallon storage capacity for finished products. Isn't this evidence of the fact that we are meeting the painting demands of users, large and small, everywhere?

Adrian J. J. J.
President

The Glidden Company
Cleveland
Heath & Milligan Mfg. Company
Chicago
Adams & Elting Company
Chicago
Campbell Paint & Varnish Company
St. Louis
T. L. Blood & Company
St. Paul
The American Paint Works
New Orleans
Twin City Varnish Company
St. Paul
The Forest City Paint & Varnish Co.
Cleveland
The A. Wilhelm Company
Reading
Nubian Paint & Varnish Company
Chicago

In Canada:
The Glidden Co., Ltd., Toronto, Ont.

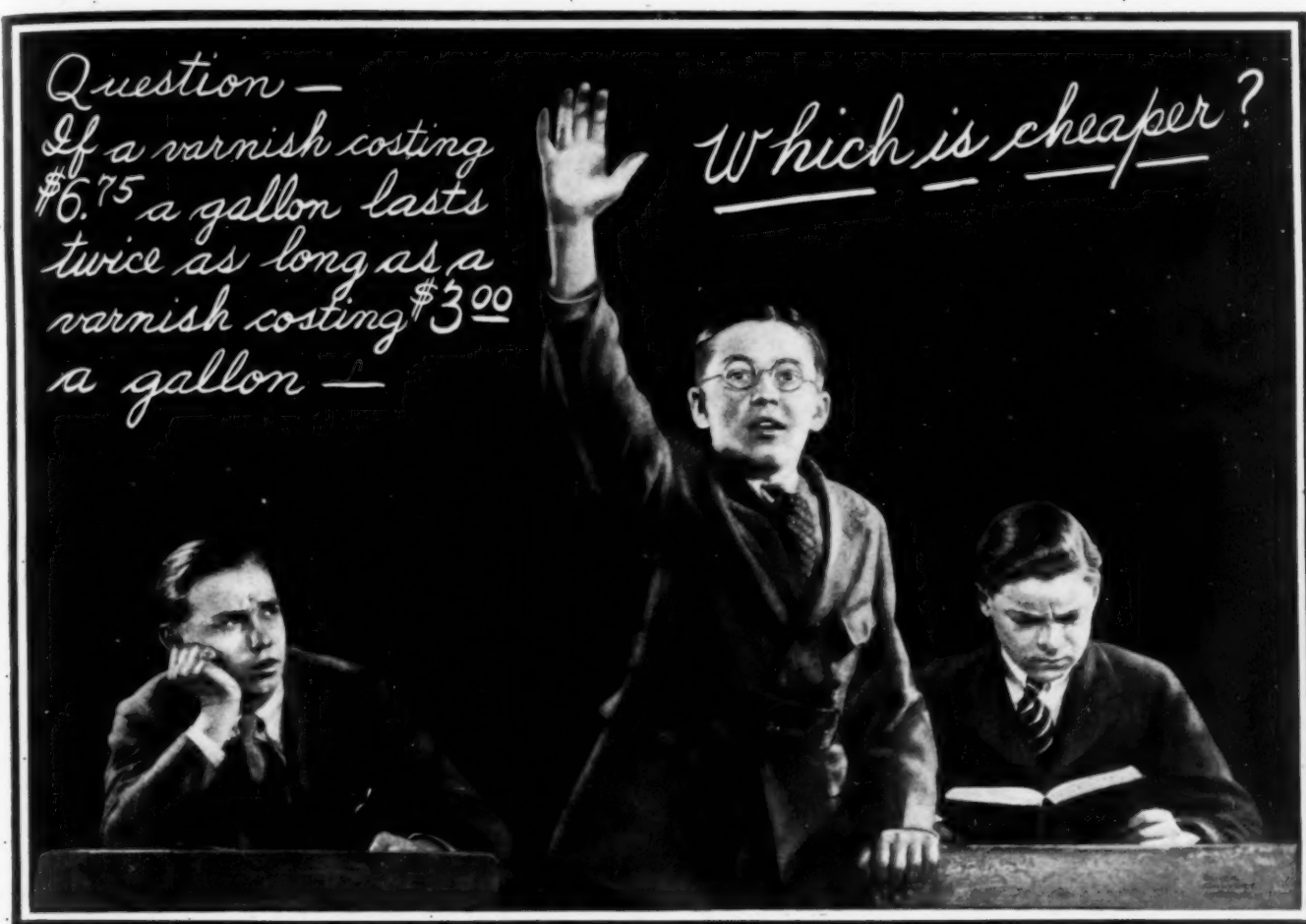


Photo by courtesy of American Optical Company

A Problem in Maintenance Cost

ANY school boy will answer the question on the black board in a minute. But he won't figure on the cost of labor! Neither will he consider the time and trouble of doing the job 2 or 3 times.

Every purchasing agent, however, knows that even a large apparent saving in first cost doesn't always mean a saving in the long run. He recognizes the difference between cheapness and economy.

Valspar, although more expensive than ordinary varnishes, means real economy. It saves the cost of frequent refinishing—does away with the trouble and loss of time in moving the furniture out and back again. *For Valspar lasts twice as long as most varnishes—and is better looking.*

Desks, tables, floors and woodwork finished with Valspar can be washed with hot

soapy water and ammonia. Valspar protects woodwork against spilled liquids of all kinds. Acids, alkalis or strong disinfectants never harm a Valsparred Surface.

The experience of hundreds of thousands of Valspar users the world over bears out every claim for Valspar superiority in looks, durability and waterproofness.

Valspar and Valspar in Colors

Valspar and Valspar in colors meet every need. Clear Valspar Varnish gives a bright, wearproof finish; Valspar Varnish-Stains color the wood in beautiful wood effects and Valspar it at the same time; Valspar-Enamels cover the surface with solid color. All three are waterproof, durable, elastic.

Reduce yearly maintenance cost with Valspar

VALENTINE & COMPANY
Established 1832

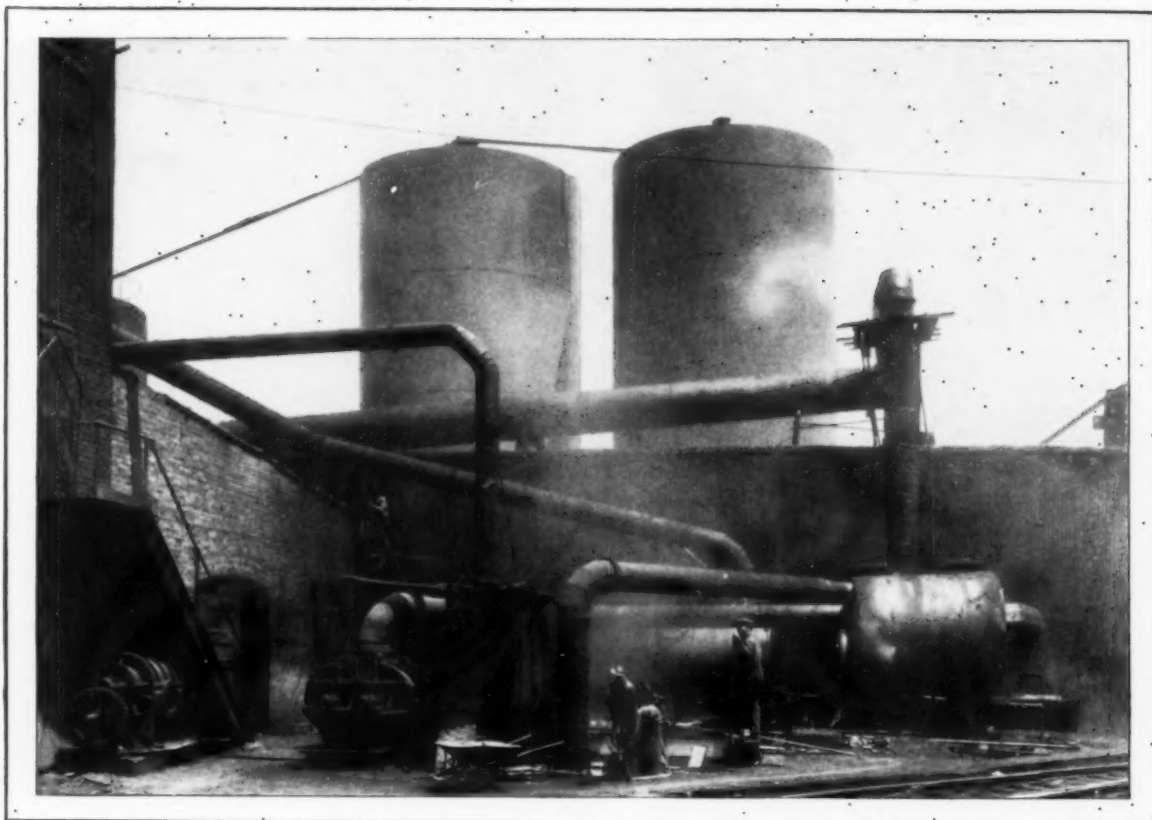
Largest manufacturers of
high-grade varnishes
in the world

VALENTINE'S
VALSPAR
The Varnish That Won't Turn White

VALENTINE & COMPANY

New York Chicago Boston
Toronto Paris London
Amsterdam

W. P. Fuller & Co., Pacific Coast



Tanks painted with Sublimed Blue Lead are protected against rust

THE asphalt and refinery tanks of the Lehon Company, 44th and Western Avenue, Chicago, are protected from rust with a tough film of lead which grips the metal surfaces of these tanks tenaciously. This lead paint film—Eagle Sublimed Blue Lead—has unusual rust preventive qualities, combined with complete protection from the weathering and gas fumes so destructive of the ordinary metal paint.

Eagle Sublimed Blue Lead is the most recent member of the distinguished family of Eagle lead-in-oil

paints—including Eagle White Lead, and Eagle Red Lead. It has gained instant popularity everywhere for its many advantages—greater economy, ease of brushing or airbrushing, further spreading, pleasing serviceable

color, and the important fact that it does not harden in the container. Above all it offers adequate protection against rust and weathering.

Eagle is sold ground in pure Linseed oil ready to break up.

Write today for a free copy of the valuable book, "Fighting Rust with Sublimed Blue Lead."



EAGLE

Sublimed BLUE LEAD

"Does not harden in the Container"

The EAGLE-PICHER LEAD COMPANY • 860-J 208 South La Salle Street • Chicago
Producers of lead and allied products

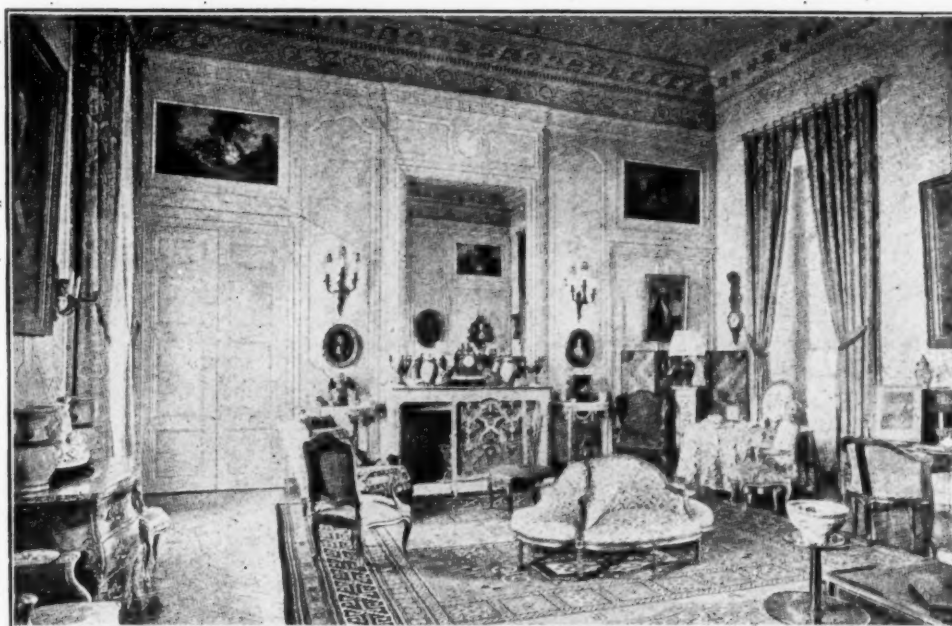
Sales Offices

CINCINNATI CLEVELAND PITTSBURGH PHILADELPHIA NEW YORK MINNEAPOLIS
BOSTON BUFFALO DETROIT BALTIMORE NEW ORLEANS KANSAS CITY ST. LOUIS JOPLIN

Manufacturing Plants

CINCINNATI NEWARK GALENA, ILL. HENRYETTA, OKLA. PICHER, OKLA. CHICAGO
EAST ST. LOUIS, ILL. ARGO, ILL. JOPLIN, MO. HILLSBORO, ILL. ONTARIO, OKLA.





Salon in an Eighteenth Century
Chateau in Normandy

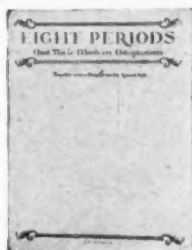
Most Famous of Eight Famous Periods— **FRANCE IN THE EIGHTEENTH CENTURY**

BECAUSE of its subtle play of line and color, because of its grace and charm and delicacy—the period of Louis XVI is generally accepted as the most perfect of all decorative styles—and one of the most popular.

Yet its very perfection is apt to leave us cold.

There is no type of interior that requires more expert treatment, more real feeling and discrimination on the part of decorator and designer.

The book "Eight Periods and Their Modern Adaptation," prepared by the Murphy Varnish Company, contains a valuable, comprehensive chapter on French Influence in the Eighteenth Century.



Thousands of architects and interior decorators have praised it—found it a wonderful guide in transferring French influence to American art—in adapting the characteristics of the late Eighteenth Century to modern usage.

It is interesting, authoritative, up-to-date! Illustrated with actual photographs of charming French interiors here and abroad. It gives in handy reference form suggestions and information on the selection of hangings and upholstery, fittings and decoration. Also detailed specifications for adapting seven other famous periods to modern requirements.

You will want a copy for your file. A letter to us will bring it.

Murphy Varnish Company

Newark, N.J.
Chicago, Ill.

"Save the surface and
you save all" — *Arch. & Inter.*

San Francisco, Calif.
Montreal, Canada



Architects:
RANKIN, KELLOGG & CRANE
General Contractors:
ROYDHOUSE-AREY CO.
Contracting Painters:
WOOD-STRETCH & CO.



SHERWIN-WILLIAMS FINISHES

Used exclusively on the new Elverson Building, Philadelphia

THE new home of the Philadelphia Inquirer is one of the most notable buildings of its kind in the world. It has a depth of an entire city block, is practically a block in width and there is nearly as much of the building below ground as above.

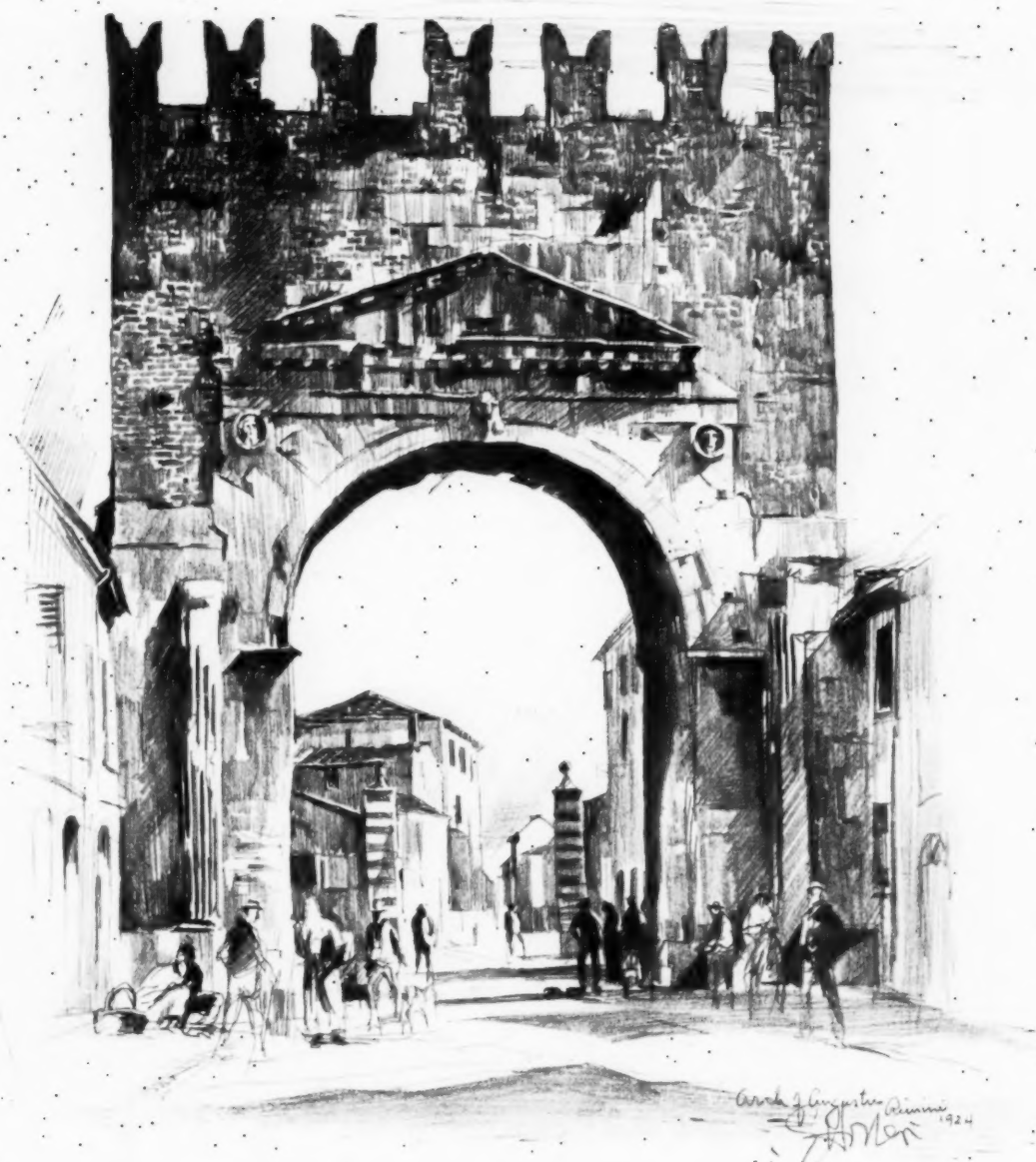
Sherwin-Williams finishes were used exclusively in this building including the owner's palatial residence apartment on the top floor. Fully two carloads of material were used—SWP, Flat-Tone, Save-Lite Mill White, Old Dutch Enamel, Scar-Not Varnish, Rexpa Var-

nish, Metalastic and other products. The building has a white exterior with gold dome—it is flood lighted at night.

The selection of the Sherwin-Williams products exclusively for the Elverson Building is indicative of the standards maintained throughout this remarkable structure. It was found that Sherwin-Williams had a product exactly suited to every surface in the building requiring finishing. More specific details will be furnished promptly upon request. In writing, ask for a copy of the Architects' Painting Guide.



SHERWIN-WILLIAMS



THIS Arch of Augustus at Rimini was built about 27 A. D. for a beloved ruler and was once the entrance to the ancient walled city. Although out of the tourist's accustomed path, Rimini is one of the most picturesque of Old World cities. What could be more appropriate than a 3 B Eldorado to catch and hold the spell of such a place!

DIXON'S ELDORADO

"the master drawing pencil"

JOSEPH DIXON CRUCIBLE COMPANY

Pencil Dept. 224-J

Jersey City, N. J.

SAMPLE OFFER

Write for full-length free samples of "The master drawing pencil" and of Dixon's "BEST" Colored Pencils. In their field, the "BEST" Colored Pencils hold the same position of supremacy as Dixon's Eldorado.

100% PURE VEGETABLE OILS
FOSSIL GUMS
TURPENTINE
MAKE



MARTIN'S VARNISH
100% PURE

CONTAINS NO BENZINE OR ROSIN

There is no adulteration in Martin's 100% Pure Varnish. It is composed 100% of Pure—Old-Fashioned—Logical Varnish materials; put together in the most modern and efficiently equipped varnish plant in this country. The results to you mean satisfied and permanent customers, increased demand and increased profit.

MARTIN VARNISH CO
PIONEERS OF 100% PURE VARNISHES
CHICAGO

THIS IS NUMBER SIX OF A SERIES OF "EARLY AMERICAN ARCHITECTURE"



Hall —
PEPPERILL HOUSE —
Kittery, Maine. Built in
the latter part of the
seventeen-hundreds.

DEVOE Paint and Varnish Products have been *highly regarded* since 1754 — more years than this country has been a republic.

Consequently, the architect can experience a sense of safety and confidence in specifying Devoe Paint and Varnish Products which are backed by the 171 years' experience of the oldest paint manufacturer in America.

Devoe & Reynolds Co., Inc.

Executive Offices: 1 W. 47th St., New York City

DEVOE

PAINT AND VARNISH PRODUCTS



Mantel —
PEPPERILL HOUSE.
Showing cupboard at side.

At the completion of the series, reprints will be mailed to all architects who have requested them. Write, today.

What to give? simplified

HAND FORGED
METAL WORK
from

TODHUNTER

GIFTS

ANDIRONS & OTHER FIRE-
PLACE EQUIPMENT - TRIVETS
LETTER BOXES - LAMPS
FOOT SCRAPERs - DOOR
PORTERS - ASH TRAYS
BELLS, ETC.

Special Illustrated Booklet
Sent upon request



Copies of interesting old designs,
the work of our own craftsmen
and not to be found elsewhere.

414 Madison Avenue, New York

**For a Real paint job
nothing is equal to
a good Brush /**



Send for
Illustrated
Literature

REGARDLESS of the claims
made for paint spraying de-
vices, Brushes are still the tools
of *Better Painting*.

Wherever long life, fine appear-
ance and lasting protection
are more desirable than a pos-
sible small saving in first cost,
Brushes must be used.

And remember this—

**Whiting's Celebrated Brushes
Adams Superior Brushes**

have been preferred by Master
Painters for more than one hun-
dred years.

**WHITING-ADAMS
BOSTON**

Brush Manufacturers for over 117 years and the largest in the World

Here are five good reasons
why you should specify

**BIRD'S
Neponset Black
(Waterproof)
Building Paper**

1 It is durable!

Neponset Black has a glistening, asphalt coated surface that keeps out drafts and dampness and serves as a permanent barrier against the elements.

2 It gives protection

Neponset Black is thoroughly saturated and impregnated, through and through, with waterproofing asphalt. It makes a watertight covering over roof boards and should be used under slate, tile, metal or asphalt shingles.

3 It saves money!

Neponset Black back of stucco and under clapboards or shingles will make it possible to heat the house more economically than if it is sheathed with ordinary dry paper or not sheathed at all.

4 It is odorless!

Neponset Black may safely be specified for cold-storage use and for ice-houses. It has absolutely no odor.

5 Your contractor or builder can get Neponset Black in a moment's notice because it is in stock everywhere. Ask us to send you complete specifications for its use, or refer to SWEET'S.



BIRD & SON, inc.

Established 1795

EAST WALPOLE, MASS.

Chicago Office and Plant, 1472 West 76th Street

New York Office, 295 Fifth Avenue

Bird & Son, Ltd., Hamilton, Ontario

Manufacturers of
**NEPONSET TWIN SHINGLES
PAROID ROOFING**

Bird's Asphalt Twin Shingles, Four-in-one Shingles,
and Shingle Design Roll Roofing; Bird's Neponset
Board; Bird's Neponset Rugs and Floor Coverings.



Redwood entrance—124 Santa Clara Ave.,
San Francisco, Cal., Moiron and Garren,
Architects, San Francisco.



Residence in Montecito,
Santa Barbara, Cal.

Music Room—All Red-
wood finish, stained to rich
rose-brown tone and
finished in dull wax.

Russell Ray, Architect,
Chicago and
Santa Barbara




Living Room—San Francisco Golf
and Country Club, San Francisco, Cal.
Finished in Redwood.

Geo. W. Kelham, Architect,
San Francisco.

for beautiful exteriors and interiors—

REDWOOD



To architects and builders we will gladly send a digest of "Technical Note No. 173" issued by the U. S. Forest Products Laboratory, which assigns to Redwood the highest rating for durability of any commercially used wood, either hard or soft. Write for it and for our "Construction Digest".

REDWOOD makes and keeps exteriors beautiful because it does not warp, shrink or swell—because it is permeated during growth with a natural preservative which protects it against fungus decay—because its uniform texture and freedom from pitch enable it to take and hold paint well.

For interiors, Redwood's rose-pink to reddish brown color, its immense variety of grain patterns and the satisfactory effects obtained with wax, stains and paint make it most desirable. It can be obtained in extra wide boards for special, one-piece panels.

Because it resists rot, Redwood should be used wherever wood is exposed to the weather or to soil moisture—for shingles, siding and clapboards, foundation timbers, mudsills, door and window frames, mouldings, porch columns and exterior trim, cornices, railings and balusters, summer houses, garden furniture, pergolas and greenhouse construction.

The Pacific Lumber Co.
Redwood

3063 McCormick Building
332 So. Michigan Ave.
Chicago

922 Pershing Sq. Building
100 E. 42nd St.
New York City

Robert Dollar Building
311 California St.
San Francisco



WRIGLEY BUILDING
Chicago

Graham, Anderson, Probst & White, Architects
Lanquist & Illsley Co., Contractors



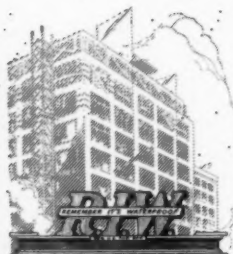
MISSISSIPPI WIRE GLASS CO.

220 Fifth Avenue, New York

Chicago

St. Louis

SAVE by building this winter "R. I. W." Quick-Done Makes It Practicable



PRODUCTS
PRESERVE METAL, CONCRETE,
PLASTER, WOOD, and
OTHER SURFACES

THIS "R. I. W." product simplifies winter building by neutralizing the effects of winter weather. Its use makes winter building profitable. The primary purpose of this material is to prevent the freezing of the gauging water used in cement mortar and concrete construction; also to hasten the initial and final set, and produce hydration at low temperature.

Write Dept. F for the facts.

TOCH BROTHERS

ESTABLISHED 1848

INCORPORATED 1922

Technical and Scientific Paint and Varnish Makers

110 EAST 42nd STREET, NEW YORK

Works: LONG ISLAND CITY, N. Y.

Liquid Velvet

THE SPECIFIED BRAND

The Washable Wall Enamel

Liquid Velvet is a high-grade, oil-base flat wall enamel finish and should not be confused with water colors, calomine, or other finishes of a like nature. Liquid Velvet is thoroughly waterproof, permitting surfaces finished with it to be washed many times without danger of having them crack, chip, peel or fade.

SPECIFICATIONS

See Pages

1590 and 1591

SWEET'S CATALOGUE

O'BRIEN
VARNISH COMPANY
— SOUTH BEND, INDIANA —

RODDIS DOORS



Unselected Birch Door—with Type "B" Inlay of White Holly and Ebonized Wood

WHEN inlaid, Roddis Flush Doors present an enduring beauty obtainable only from finest woodwork. No unsightly panels or moldings mar these broad surfaces of natural wood. Any desired wood may be had to carry any specified finish; the inlay can be of your designing.

This lasting beauty is assured forever by the Roddis guarantee that never will these Doors sag, warp, shrink, swell, separate nor check. The exclusive Roddis construction, using waterproof glue throughout, prevents

all such common door failings. And, moreover, they are sanitary, soundproof and fire-resisting.

Roddis Flush Doors are the prevailing preference of informed architects for important modern buildings. In hospitals, hotels, schools, apartments, public buildings and homes they render a service no other door can equal.

Full facts regarding these modern Doors and much helpful door data are in our new 88-page reference catalog. Write for it today:

RODDIS LUMBER & VENEER COMPANY, Marshfield, Wisconsin

Branches in all principal cities throughout the world

For A Quarter-Century the Largest Makers of Flush and French Doors

STABILIZED BY KOHL-LOCK-JOINT COLUMNS



Middlesex Memorial Chapel, Concord, Mass.
 Appleton W. Cornell and Frank A. Sterns, Architects
 William Coulson and Company, Contractors

LEADING architects know that their artistic conceptions must be expressed in terms of permanence if clients are to enjoy enduring satisfaction. That is why, for 26 years, they have been specifying Kohl Lock-Joint Columns. Catalog I-47 brings full details. Address Hartmann-Sanders Co., 2151 Elston Ave., Chicago. Eastern office and showroom, 6 E. 39th Street, New York City.

HARTMANN-SANDERS
 Colonial Columns



THEY CANNOT COME APART

120

CURTIS WOODWORK

Few items that enter into the construction of a building, be it the plainest small cottage or finest monumental structure, are more conspicuous to everyone than the millwork and interior finish.

—ROSS E. STEWART,
 in *The American Architect*

It is because the Curtis Companies had this conception of the importance of woodwork that they sought the help of the architectural profession in designing the Curtis line.

Trowbridge & Ackerman, of New York, were retained to design every item of Curtis Woodwork, from the smallest molding to the largest pieces of permanent furniture. Every design is carried, in standard sizes and suitable woods, ready for immediate shipment. This is the first and only line of architectural standardized woodwork available to the profession.

Many architects have found a satisfactory solution of their millwork problems in using Curtis Woodwork. We will be glad to give you full information concerning our service to architects.

THE CURTIS COMPANIES' SERVICE BUREAU

358 Curtis Building, Clinton, Iowa

Curtis, Towle & Paine Co.	Lincoln, Nebraska
Curtis Sash & Door Co.	Sioux City, Iowa
Curtis, Towle & Paine Co.	Topeka, Kansas
Curtis & Yale Co.	Wausau, Wisconsin
Curtis Bros. & Co.	Clinton, Iowa
Curtis-Yale-Holland Co.	Minneapolis, Minn.
Curtis Door & Sash Co.	Chicago, Illinois
Curtis Detroit Co.	Detroit, Michigan

Curtis Companies Incorporated
 Sales Offices: Pittsburgh, New York, Baltimore

Beauty: Durability: Economy

in architectural design will most frequently find its best expression when

Tide Water
Cypress
"The Wood Eternal"

is the material selected for the erection of all out-of-door structures. "Every wood to its purpose" should be the guiding principle in specifying lumber. There may be a choice for load-bearing timbers, protected from dampness and where strength counts most. But, there can be only one decision where durability under exposure is the determining factor—then experienced judgment counsels the use of "Tidewater" Cypress for such parts as the PORCHES, SIDINGS, SASH, DOORS, SHINGLES, CORNICES, and EXTERIOR TRIM of HOUSES. Also, for such structures as PERGOLAS, FENCES, GARAGES, BARNs and other OUTBUILDINGS.

For further data see Sweet's Catalogue or write us. We have some very interesting and authentic information on the longevity of "Tidewater" Cypress; likewise, on tupelo, the hard-wear flooring.

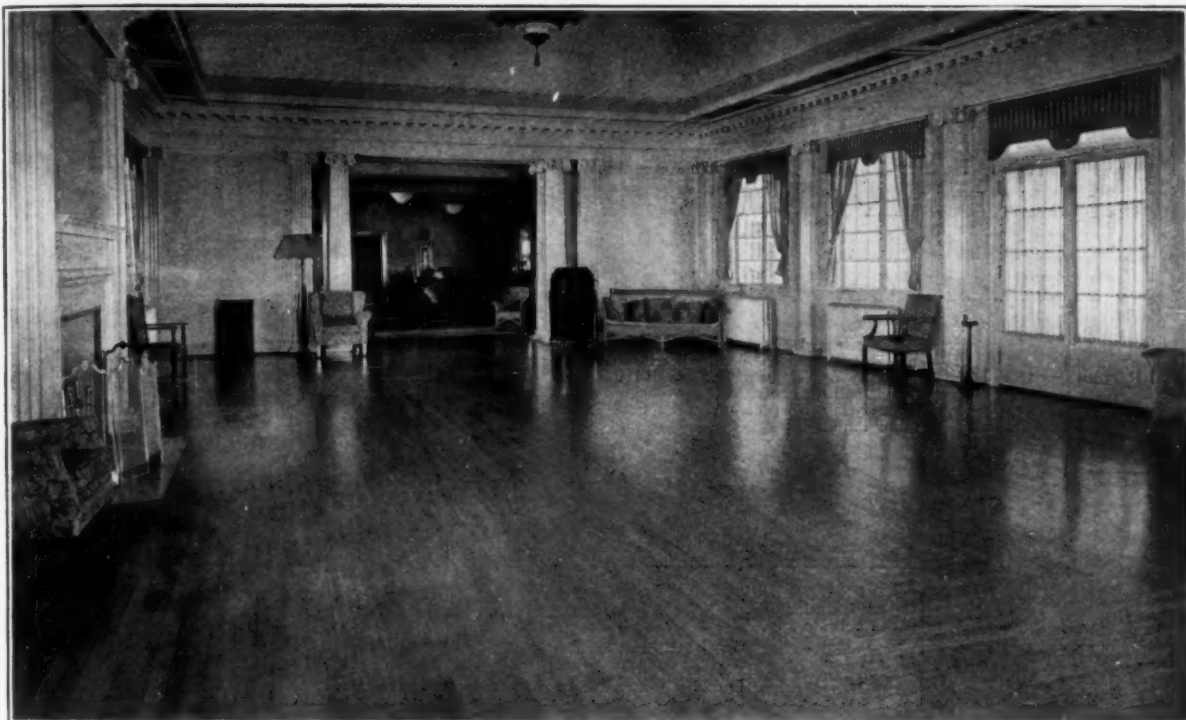
SOUTHERN CYPRESS MANUFACTURERS' ASS'N



1234 Poydras Building, New Orleans, La.
 or 1234 Graham Building, Jacksonville, Fla.



Insist on Trade-marked "TIDEWATER" CYPRESS, Accept no other.



Long-Bell Oak Flooring

THE widespread use of Long-Bell trade-marked oak flooring is proof of its durability, beauty and economy.

Safeguards in the manufacture of this flooring assure maximum construction economy, particularly in laying and finishing costs.

Long-Bell trade-marked oak flooring is made to give lasting satisfaction to architect and builder alike. Sold by retail lumber dealers.

THE LONG-BELL LUMBER COMPANY
R. A. LONG BLDG. Lumbermen Since 1875 KANSAS CITY, MO.

Long-Bell
Trade Marked L U M B E R

Douglas Fir Lumber and Timbers; Southern Pine Lumber and Timbers;
Creosoted Lumber; Timbers, Posts, Poles, Ties, Guard-Rail
Posts, Piling; Southern Hardwood Lumber and
Timbers; Oak Flooring; California White
Pine Lumber; Sash and Doors.

Mr. Sydney Sterling

[In charge of Equipment and Maintenance, LOS ANGELES BILTMORE]

Says:

"30,000 PIECES OF LAUNDRY GO THRU OUR PFAUDLER CHUTE DAILY—THIS INSTALLATION SAVES THE SERVICE OF 4 EMPLOYEES BESIDES SERIOUS CONGESTION ON FREIGHT ELEVATORS"

Bottom Section of Pfaudler Chute — Los Angeles Biltmore, Los Angeles, Cal.



The Glass Lined Laundry Chute has as much reason for being installed in the up-to-date hotel, apartment or hospital, as has the obviously necessary mail chute. In fact from the view point of the building operator, it is even *more important* inasmuch as it eliminates completely an item of direct expense—viz., the disposal of soiled linen and laundry.



Mr. Sydney Sterling, in Charge of Equipment and Maintenance, Los Angeles Biltmore. One of the many enthusiastic supporters of the Pfaudler Chute.

**"Keep Down Laundry Expense
By Putting Up a Pfaudler Chute"**

—MAIL THIS COUPON—

"PFAUDLER"
217 Cutler Bldg.,
Rochester, N. Y.

Gentlemen:—

Send me your new booklet describing the Pfaudler Glass Lined Laundry Chute. I am preparing plans for.....

(State nature of building):

Name.....

Street.....

City.....

A. E. 12-25



PFAUDLER GLASS LINED LAUNDRY CHUTE



J. M. White, Architect

WOMEN'S DORMITORY, UNIVERSITY OF ILLINOIS
Built of "Western" Cloister Brick, Red Range

CLOISTER BRICK are made in distinctive and beautiful red and brown ranges, and have been extensively used in all types of structures, from residences to public buildings.

The quality of CLOISTER BRICK is best evidenced by the fact that our production greatly increases from year to year, and is constantly going into a wider range of territory.

CLOISTER BRICK is an impervious shale brick, with a rich, soft, velvety texture, that is in no sense extreme, but gives life to the wall surface.

Descriptive Booklet, sent on request

WESTERN BRICK COMPANY
Danville, Illinois

CAPACITY OVER ONE HUNDRED AND THIRTY-FIVE MILLION A YEAR

"BEAUTIFUL BIRCH FOR BEAUTIFUL WOODWORK"

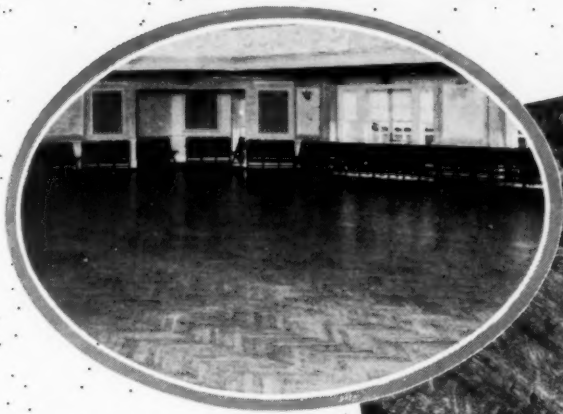


"Beautiful **birch**" has really special advantages for HOSPITALS—beauty, hardness, versatility of use, very low absorbency, durability and—well, the rest are in the **birch** book for which

Will you please Write?

THE BIRCH MANUFACTURERS
205 F. R. A. Building Oshkosh, Wis.

Have You, Too, Been Disappointed?



Ritter Parquetry Oak Floor in home of Young Men's-Hebrew Association, Philadelphia, Pa. Note enlarged panel shown at right.

No Other Oak Compares with Appalachian Oak



WITH a conscientious desire to obtain the best in Oak flooring many architects specify "Clear" grade—only to be disappointed with the result. That is because in the standard rules for grading consideration is given only to such defects as knots, sap and wormholes; no consideration being given to the character of the grain, texture and color of the wood.

Oak flooring varies in both structure and appearance according to the conditions under which the Oak timber was

grown. The fine, subdued grain, even texture, uniform color and faultless match and finish of Ritter Appalachian Oak Flooring result directly from excellent growth conditions on well drained mountain slopes, and painstaking care in manufacture.

Only the growth conditions existing in the Appalachian highlands can assure you these beauties in the material; RITTER methods further assure you of the best in its manufacture and grading. Specify RITTER Appalachian Oak Flooring in the grade desired. You will not be disappointed with results.

REMEMBER—In the standard rules for grading Oak Flooring consideration is given to such imperfections as knots, worm holes, sap, splits, and similar defects, but consideration is not given to grain, texture or color; therefore, to be assured of beautiful Oak floors, it is necessary, in addition to specifying the grade desired, to also specify that the flooring ordered must be manufactured from Appalachian Oak. The easiest and surest way of securing a satisfactorily finished floor is to insist on RITTER Appalachian Oak Flooring.

W. M.
RITTER
LUMBER CO.,
Columbus, Ohio.

Gentlemen:

Kindly send me, without obligation, your booklet giving the reasons for the superiority of Ritter Appalachian Oak Flooring and other valuable information on how to properly lay flooring.

Name.....

City.....

Address.....

RITTER
APPALACHIAN OAK
FLOORING

Mail the coupon for complete information regarding Ritter Appalachian Oak Flooring

Technical Data on Laying Oak Floors

7.—LAYING PARQUETRY FLOORING

Preparatory to laying Parquetry Oak Flooring, the sub-floor should be thoroughly dry and swept to remove all dirt, dust, shavings, nails, and other refuse. The sub-floor should then be covered with a good grade of moisture-proof paper as described in article number four of this series. Also see same article relative to framing in the fireplaces.

METHOD OF LAYING

Parquetry floors are usually laid with a margin of strip flooring as a border around the walls. The width of the margin of strip flooring used depends upon the size of the room and squares used.

The laying of Parquetry Flooring can be started in the center of the room (Figure 1) and thus

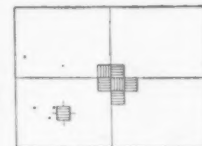


Fig. 1

be successfully laid when much care is used.

If the room is not perfectly square this method will tend to equalize the margin. Also it can be started from corner by squaring up same. (Figure 2).

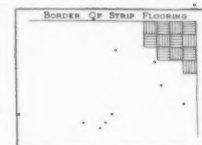


Fig. 2

The laying of the herringbone pattern is usually started from the center of the room. (Figure 3).

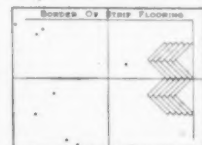


Fig. 3

Slip tongue should be used on all blocks where the grooves come together.

KINDS OF NAILS REQUIRED

Each piece of Parquetry Flooring should be nailed with two nails, one nail near each end at a distance of one-fourth the length of the piece from the end.

Some floor layers use "skip-nailing" on short length parquetry. When well done this method is not objectionable, but the use of two nails is preferable.

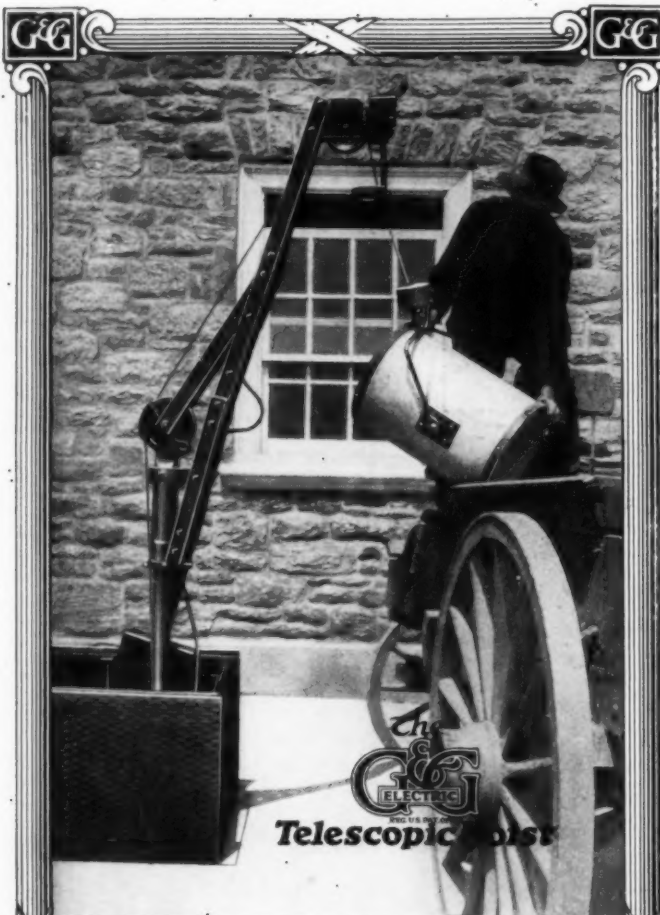
The use of 7d cut casing nails is recommended. Under no conditions use wire nails. The nails should be driven at a 45° to 55° angle.

On margin strips which have to be face nailed 10d wire finish nails should be used, countersunk and puttied over.

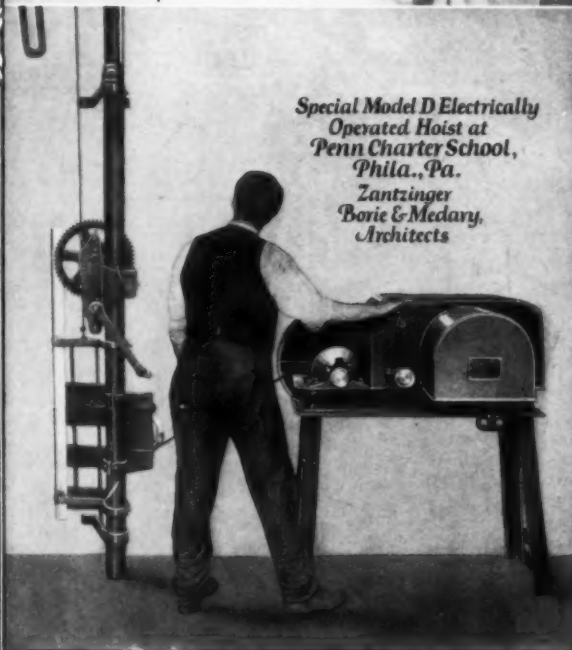
ALLOWANCE FOR EXPANSION AT WALLS

It is important that at least 1/4" space be left on all sides of the room between the wall and the hardwood floor to allow room for the expansion of the finished floor, should it absorb some dampness. This space is covered by the quarter round or base molding.

This is the seventh and last of this series. See Sweet's and American Architect Specification Manual for complete information.



Telescopic Hoist



*Special Model D Electrically
Operated Hoist at
Penn Charter School,
Phila., Pa.
Zantinger
Borie & Medary,
Architects*

Built for long, hard usage!

Catalog upon request

SWEET'S

19th Architectural Catalog pp. 2399-2407
20th Architectural Catalog pp. 2625-2633

GILLIS & GEOGHEGAN

544 West Broadway, New York

Since



1852!

Season's Greetings

AS THE OLD YULETIDE SEASON rolls around again, let us pause a little in our business activities and, remembering the significance and solemnity of the greatest of holidays, extend to one another the old, old wish:

*A Merry Christmas and
A Happy and Prosperous New Year*

W.F. DOUGHERTY & SONS, INC.

Manufacturers Since 1852

Dougherty's "Superior" Kitchen Equipment

1009 Arch Street

Philadelphia

OTIS

FOR NEARLY THREE QUARTERS OF A CENTURY

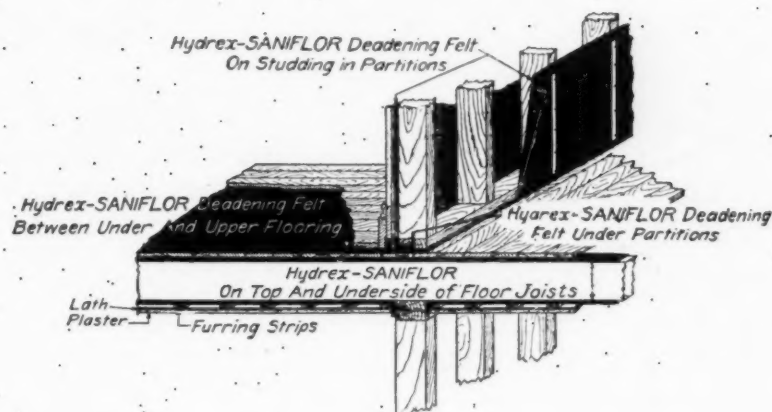
**THE WORLD'S WORD
FOR
ELEVATOR SAFETY**

OTIS ELEVATOR COMPANY

OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD



HYDREX



Double-layer ROOFING FELT

HYDREX double-layer roofing felt is manufactured especially for use where Slate or Tile is specified for the roofing. "Hydrex" consists of two sheets of saturated felt with the top surface coated; between the felt there is a layer of flexible asphaltic

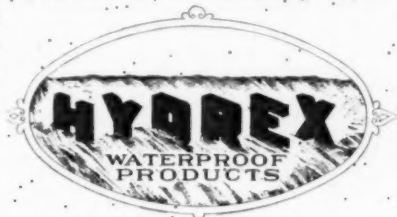
compound. This compound tenaciously hugs the nails so that water-tightness is absolutely assured.

Hydrex Double-Layer Roofing Felt is also used as insulation under tin and copper, either on roof or siding, and as a water-tight floor inter-lining.

Hydrex Waterproof Building Paper

This Building Paper gives that resistance to dampness and wind penetration so essential in small house construction. It is applied under clapboard,

shingle, stucco, slate and tile. Hydrex Building Paper is saturated, and coated on both sides, with oils and bitumen, and contains no acid or tar.



HYDREX ASPHALT PRODUCTS CORPORATION

Waterproof Felt, Cloth, Burlap, Building Papers, Deadening Felt; Roofings, Paints, etc.

*Specialists in
Structural Waterproofing, Insulation and Soundproofing*

120 Liberty Street, New York

Chicago

Philadelphia

The Straus Roll Call of 1925

VIEWED from any angle, the operations of S. W. STRAUS & CO. for 1925 in the field of first mortgage real estate financing form themselves into impressive outlines.

Our operations have covered 35 large cities in fifteen states and the Dominion of Canada, extending from Toronto and Seattle on the north to Tampa and Los Angeles on the south.

The projects financed range in size from \$250,000 for a suburban apartment house to \$10,000,000 for a great New York office building; from \$300,000 for a warehouse to \$8,000,000 in literally lifting a great Chicago industry from one section of the city and creating for it a finer, larger and more profitable location.

The 1925 roll call of Straus-financed buildings speaks eloquently for the financial strength, knowledge and experience of the House, and as well for principals, architects and builders everywhere who have reposed their confidence in it.

We are always interested in loans of \$250,000 upward, either as permanent financing of structures to be built or for completed buildings of the better type. Write today for our booklet, "The Straus Plan of Finance". Address our

LOAN DEPARTMENT

S.W. STRAUS & CO.

ESTABLISHED 1882

INVESTMENT BONDS

INCORPORATED

STRAUS BUILDING
565 Fifth Ave., at 46th St.
NEW YORK

STRAUS BUILDING
79 Post Street
SAN FRANCISCO

STRAUS BUILDING
Michigan Ave. at Jackson Blvd.
CHICAGO

43 YEARS WITHOUT LOSS TO ANY INVESTOR

Selected List of Manufacturers' Publications

FOR THE SERVICE OF ARCHITECTS, ENGINEERS, DECORATORS, AND CONTRACTORS

The publications listed in these columns are the most important of those issued by leading manufacturers identified with the building industry. They may be had without charge, unless otherwise noted, by applying on your business stationery to *The Architectural Forum*, 383 Madison Ave., New York, or the manufacturer direct, in which case kindly mention this publication.

ACOUSTICS

Johns-Manville, Inc., Madison Ave. & 41st St., New York, N. Y.
Architectural Acoustics. Booklet. 6 x 9 in. 24 pp. Illustrated.
Treatise on the correction of architectural acoustics in Churches, schools, hospitals, office buildings and other places.
Rubberstone Corporation, 1400 Broadway, New York City.
Sound Reflections. Brochure. 12 pp. 5½ x 8 in. A valuable little work on acoustics.

ASH HOISTS—ELECTRIC AND HAND POWER

Gillis & Geoghegan, 544 West Broadway, New York, N. Y.
General Catalog. 8½ x 11 in. 20 pp. Fully illustrated. Contains specifications in two forms (with manufacturers' name and without). Detail ¼ in. scale for each telescopic model and special material-handling section.
The Man-Saving Load Lifter. 5½ x 8½ in. 8 pp. Illustrated. Describes G&G Telescopic and Non-Telescopic Hoists for handling material in factories.

BOILERS—See Heating Equipment

BRICK

Acme Brick Company, Ft. Worth, Tex.
Series No. 1

Architectural designs rendered in Acme Brick. Booklet. 11 x 8½ in. Illustrated. A series of 48 photogravures showing architectural designs rendered in Acme brick. Illustrations show the various types of buildings erected in the Southwest in recent years. Sent free to architects applying on their office stationery.

American Face Brick Association, 1751 Peoples Life Bldg., Chicago, Ill.

The Story of Brick. Third Edition. Booklet. 7 x 9¼ in. 55 pp. Illustrated. Presents the merits of face brick from structural and artistic standpoints. Tables of comparative costs.
The Home of Beauty. Fourth Edition. Book. 8 x 10 in. 72 pp. Color plates. Presents fifty designs for small face brick houses submitted in national competition by architects. Text by Aymar Embury II, Architect. Price 50c.

"English Precedent for Modern Brickwork." A book of plates and measured drawings of Tudor and Gothic brickwork with a few recent variations of modern architects in the spirit of the old work. Price \$2.00. 100 pp. Illustrated. 8½ x 11 in.

Architectural Details in Brickwork. Series 1, 2, 3. 8½ x 11 in. Very useful to the architect or draftsman. Sent free to architects applying on their office stationery. To others \$1.50.

BUILDERS

Longacre Engineering & Construction Co., Inc., 345 Madison Avenue, New York City.
Send for latest information.

BUILDING FINANCE

S. W. Straus & Co., 565 Fifth Ave., New York, N. Y.
The Straus Plan of finance is an attractively prepared booklet of 30 pages 6 x 9 inches in size, which summarizes the plan under which S. W. Straus & Co. finance modern office building, apartment house, residential hotel and other types of construction. It is illustrated with sketches of buildings throughout the United States which secure bond issues purchased by S. W. Straus & Co.

BUILDING STONE—See Stone, Building

BUILDING, STANDARD STEEL

Truscon Steel Company, 250 W. Lafayette Blvd., Detroit, Mich.
Truscon Standard Building Catalog. 8½ x 11 in. 48 pp. Contains data and illustrations.

BUILDING, STEEL PRODUCTS FOR

Massillon Steel Joist Company, The, Massillon, Ohio.
Massillon Bar Joists. Pamphlet. 8½ x 11 in. 8 pp. Illustrated. Pamphlet containing general information descriptive of Massillon Bar Joist Fireproof Floor Construction, with cuts showing methods of construction and photographs of installations. Detailed Dimensions, Safe Loading Tables, Details of Construction. Catalog. 8½ x 11 in. 32 pp. Illustrated.
Catalog contains complete, detailed information about each Massillon Bar Joist Structural Unit.

National Steel Fabric Co., Union Trust Building, Pittsburgh, Pa.
Building a Permanent Home. Brochure 4 x 9 in. 20 pp. Discusses the use of steel materials in domestic buildings in a way likely to interest architects and builders.

Sales Manual. Loose leaf. 8½ x 11 in. Complete data and specifications regarding the use of this company's products.
Truscon Steel Company, 250 W. Lafayette Blvd., Detroit, Mich.
Truscon Data Book. Catalog. 3½ x 6 in. 128 pp. Illustrated. Contains complete information with illustrations on Truscon reinforcing steel, steel windows, metal lath, standard buildings, concrete inserts, steel joists, pressed steel stamping and chemical products.

CARPETS, IMPORTED

Kent-Costikyan Trading Company, Inc., 484 Fifth Ave., New York, N. Y.
Rugs. Catalog. 9½ x 6½. 56 pp. Illustrated. Illustrates and describes an unusual collection of Oriental and Occidental rugs with stock list.

CEMENT

Louisville Cement Co., 315 Guthrie St., Louisville, Ky.
Brixment. Booklet. 7½ x 5 in. 16 pp. Illustrated. Brixment, what it is, what it does, how it does it and why.

CONDUIT

National Metal Molding Co., 1113 Fulton Building, Pittsburgh, Pa.
Bulletin of all National Metal Molding Products. In correspondence folder. 9½ x 11½ in.
Sheraduct. Circular. 5 x 8 in. Illustrated.
Flaxsteel. Circular. 5 x 8 in. Illustrated.

CONSTRUCTION, FIREPROOF

Massillon Steel Joist Co., Massillon, Ohio.
Massillon Bar Joists. Brochure. 8½ x 11 in. Illustrated. Full data regarding the steel used for construction of floors in fireproof buildings of various kinds.

National Fire Proofing Co., 250 Federal St., Pittsburgh, Pa.
Standard Fire Proofing Bulletin 171. 8½ x 11 in. 32 pp. Illustrated. A treatise on fireproof floor construction.

National Steel Fabric Co., Union Trust Co., Pittsburgh, Pa.
Booklet Fireproofing Structural Steel, Booklet, 12 pp., 8½ x 11 in. Illustrated. Deals fully with use of steel for fireproofing concrete, and of steel fabric for beam and column wrapping.

Northwestern Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.

Northwestern Expanded Metal Products. Booklet. 8½ x 10½ in. 16 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated, Plaster-Sava and Longspan lath channels, etc.

DAMP-PROOFING

Philip Carey Co., Lockland, Cincinnati, Ohio.
Architects' Specifications for Carey Built-Up Roofing. Booklet. 8 x 10½ in. 24 pp. Illustrated. Complete data to aid in specifying the different types of built-up roofing to suit the kind of roof construction to be covered.

Carey Built-Up Roofing for Modern School Buildings. Booklet. 8 x 10½ in. 32 pp. Illustrated. A study of school buildings of a number of different kinds and the roofing materials adapted for each.

Sonneborn Sons, Inc., L., 116 Fifth Ave., New York.
Specification Sheet. 8½ x 11 in. Descriptions and specifications of compounds for dampproofing interior and exterior surfaces.

Toch Brothers, 110 East 42nd Street, New York City.
Specifications for Dampproofing, Waterproofing, Enameling and Technical Paint. Complete and authoritative directions for use of an important line of materials.

DOORS AND TRIM, METAL

The American Brass Company, Waterbury, Conn.
Illustrated pamphlet describing use and adaptability of Extruded Architectural Bronze Shapes for metal window frames, doors, grilles, counter screens, etc.

The Compound & Pyrono Door Company, St. Joseph, Mich.
Pyrono Handbook for Architects and Contractors. 8½ x 11 in. 16 pp. Contains full information regarding Pyrono Fireproof Veneered Doors and Trim, with complete details and specifications.

Pyrono details in sheet form for tracing.
Dahlstrom Metallic Door Company, 425 Buffalo St., Jamestown, N. Y.

Architectural Catalog. 10 x 14 in. 46 pp. 11 sections. Illustrated. Catalog showing the regular styles and types of hollow metal doors and interior trim. Various types of frames and other architectural shapes also illustrated.

Buildings as They Should Be. Booklet 7½ x 10½ in. A lavishly illustrated publication giving data and views of buildings of different kinds equipped with Dahlstrom doors and trim.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Fire Doors and Hardware. Booklet. 8½ x 11 in. 64 pp. Illustrated. Describes entire line of tin-clad and corrugated fire doors, complete with automatic closers, track hangers and all the latest equipment—all approved and labeled by Underwriters' Laboratories.

DRAFTING MATERIALS

American Lead Pencil Company, 220 Fifth Ave., New York, N. Y.
VENUS Pencil in Mechanical Drafting. Booklet C20. 6 x 9 in. 16 pp. Illustrated. Describes the many possibilities of the VENUS for technical drawing.

Catalog. 3½ x 8½ in. 25 pp. Illustrated. Describes pencils, holders, erasers, etc.

DUMBWAITERS

Sedgwick Machine Works, 151 West 15th St., New York.
Catalog and Service Sheets. Standard specifications, plans and prices for various types, etc. 4½ x 8½ in. 60 pp. Illustrated.

ELECTRICAL EQUIPMENT

Frank Adam Electric Company, St. Louis, Missouri.
Catalog No. 32—1924 Panelboards—Steel Cabinets. 48 pp. 7¼ x 10½ in. Illustrates and describes Safety Type Sectionally Constructed Panelboards, together with complete catalog listings.

The Edwin F. Guth Co., 2615 Washington Ave., St. Louis, Mo.
Brascolite Catalog No. 10. 10½ x 8 in. 28 pp. Illustrated. Catalog listing Brascolite fixtures in wide variety of plain and decorative types. Contains information of value in planning a lighting installation.

Bank and Office Building Catalog. 10½ x 8 in. 16 pp. Illustrated. Catalog listing a selected line of fixture equipment for application to all outlets in bank or office buildings or similar buildings.

Architectural Bulletins, Series of 5. 10½ x 8 in. 28-64-44-28-44 pp. Illustrated. A series of five bulletins, each treating upon the application of lighting to one particular class of service. Hos-

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 87

ELECTRICAL EQUIPMENT—Continued

- pitals; Banks and Office Buildings; Schools, Colleges and Y. M. C. A. Buildings; Church and Fraternal Buildings; Commercial Service.
- Special Hospital Catalog. 10½ x 8 in. 9 pp. Illustrated. Illustrates a special selection of fixture equipment for hospital use including types suitable for all outlets.
- Hart & Hegeman Mfg. Co., The**, 342 Capitol Ave., Hartford, Conn. The Line of Least Resistance. Catalog R, 10¼ x 7½ in. 152 pp. Illustrated. Complete display of switches, sockets, accessories and wiring devices with brief description.
- A new H & H Switch. Leaflet. 3½ x 6 in. 4 pp. Illustrated. Illustrates a new H & H composition base push switch of De Luxe quality.
- Tumbler Switches. Booklet. 3½ x 6 in. 6 pp. Illustrated. Shows complete line of H & H Tumbler Switches.
- Architects' Handbook of H & H Wiring Devices. Booklet 8½ x 11 in. 16 pp. "Written by an Architect for Architects."
- Holtzer-Cabot Electric Company**, Amory Street, Boston 19, Mass. Signaling Systems for Hospitals. Brochure. 8½ x 11 in. 42 pp. Illustrated. Contains complete data covering Nurse's Call, Doctor's Call, "In" and "Out" Fire Alarm, Watchman's Clock and Telephone Systems.
- Holtzer-Cabot Electric Co.**, Boston and Chicago. Bank signal and alarm systems. Brochure. 48 pp. 8½ x 11 in. Illustrated. An invaluable work on protective and other appliances for banks.
- Kohler Co.**, Kohler, Wis. Principle and Proof. Booklet. 48 pp. Illustrated. Describes a standard voltage automatic electric power and light plant for isolated homes, for emergency auxiliary or permanent lighting in stores, theaters, churches and schools.
- Pick & Company, Albert**, 208 West Randolph St., Chicago, Ill. School Cafeterias. Booklet. 9 x 6 in. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.
- Kitchen Equipment. Booklet. 9 x 6 in. Illustrated. Photographs and descriptions of Hotel, Club and Hospital kitchens with treatise on plans and equipment of efficient kitchens.
- Electric Kitchen Equipment. Booklet. 8½ x 11½ in. Illustrated. Photographs and descriptions of PIX "Master-Made" ranges, ovens, etc., for Hotels and Restaurants.
- Simplex Wire & Cable Co.**, 201 Devonshire St., Boston, Mass. Simplex Manual Catalog and Reference Book. 6¼ x 4¼ in. 92 pp. Contains in addition to information regarding Simplex products, tables and data for the ready reference of architects, electrical engineers and contractors.
- Specification No. 2053. For Simcore Wires and Cables. Various sizes of Conductor-Rubber Insulation.
- Western Electric Co.**, 195 Broadway, New York, N. Y. Western Electric Inter-Phones for Apartment Houses. Booklet. 5¼ x 6¼ in. 16 pp. Illustrated. Illustrates and describes use of Inter-Phones in Apartment Houses.
- Installing and Maintaining Western Electric Inter-Phones. In addition to giving general information on layout of system, details are supplied on individual Inter-Phone Systems, listing battery and wiring requirements.

ELEVATORS

- Elevator Supplies Co., Inc.**, Hoboken, N. J. Lubricators for Elevator Guide Rails. Folder 8½ x 11 in. Form S. A. 435.
- A Brief Catalog. Brochure 8½ x 11 in. 16 pp. Valuable for anyone interested in elevators.
- Otis Elevator Company**, 260 Eleventh Ave., New York, N. Y. Otis Push Button Controlled Elevators. Descriptive leaflets. 8½ x 11 in. Illustrated. Full details of machines, motors and controllers for these types.
- Otis Geared and Gearless Traction Elevators of All Types. Descriptive leaflets. 8½ x 11 in. Illustrated. Full details of machines, motors and controllers for these types.
- Escalators. Booklet. 8½ x 11 in. 22 pp. Illustrated. Describes use of escalators in subways, department stores, theaters and industrial buildings. Also includes elevators and dock elevators.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill. Elevators. Booklet. 8½ x 11 in. 24 pp. Illustrated. Describes complete line of "Ideal" elevator door hardware and checking devices, also automatic safety devices.
- Sedgwick Machine Works**, 151 West 15th St., New York, N. Y. Catalog and descriptive pamphlets, 4¼ x 8¼ in. 70 pp. Illustrated. Descriptive pamphlets on hand power freight elevators, sidewalk elevators, automobile elevators, etc.

ENAMELING

- Toch Brothers**, 110 East 42nd Street, New York City. Specifications for Dampproofing, Waterproofing, Enameling and Technical Painting. Complete and authoritative directions for use of an important line of materials.

FIRE DOORS—See Doors, Windows and Trim, Metal

FIREPROOFING—See also Construction, Fireproof

- The General Fireproofing Company**, Youngstown, Ohio. Fireproofing Handbook. 64 pp. 8½ x 11 in. Illustrated. Gives methods of construction, specifications, data on Herringbone metal lath, steel tile, Trussit solid partitions, steel lumber, self-centering formless concrete construction.
- National Steel Fabric Co.**, Union Trust Co., Pittsburgh, Pa. Booklet Fireproofing Structural Steel. Booklet. 12 pp. 8½ x 11 in. Illustrated. Deals fully with use of steel for fireproofing concrete, and of steel fabric for beam and column wrapping.

FLOOR HARDENERS (CHEMICAL)

- Sonneborn Sons, Inc.**, L., 116 Fifth Ave., New York, N. Y. Lapidolith, the liquid chemical hardener. Complete sets of specifications for every building type in which concrete floors are used, with descriptions and results of tests.

FLOORING

- Armstrong Cork & Insulation Co.**, 132 24th St., Pittsburgh, Pa. Linotile Floors for Public and Semi-Public Buildings. 7½ x 10½ in. 36 pp.
- Linotile Floors for Residences. 7½ x 10½ in. 32 pp.

FLOORING—Continued

- Armstrong's Cork Tile**. Revised Edition. Booklet. 24 pp. 5 x 7 in. Illustrated in color. Contains complete specifications.
- Armstrong Cork & Insulation Co.**, Pittsburgh, Pa. Armstrong's Cork Tile Floors. Booklet, 30 pp. 7¼ x 10½ in. An illustrated work on cork flooring.
- Armstrong Cork Co.** (Linoleum Division), Lancaster, Pa. Armstrong's Linoleum Floors. Catalog. 8½ x 11 in. 36 pp. Color plates. A technical treatise on linoleum, including table of gauges and weights and specifications for installing linoleum floors.
- Decorative Linoleum Floors. Portfolio of Color Plates. 11¼ x 15 in. 16 pp. Color plates.
- Armstrong's Linoleum Pattern Book, 1925. Catalog. 3½ x 6 in. 200 pp. Color Plates. Reproduction in color of all patterns of linoleum and cork carpet in the Armstrong line.
- Quality Sample Books. Two books, 3½ x 5¼ in. Showing all gauges and thicknesses in the Armstrong line of linoleums.
- Detailed Directions for Laying and Caring for Linoleum. Handbook, 5 x 7 in. 48 pp. Instructions for linoleum layers and others interested in learning most satisfactory methods of laying and taking care of linoleum.
- Business Floors**. Booklet. 6 x 9 in. 48 pp. Illustrated in color. Explains use of linoleum for offices, stores, etc., with reproductions in color of suitable patterns, also specifications and instructions for laying.
- Bonded Floors Company, Inc.** Division of Congoleum-Nairn, Inc., 1421 Chestnut St., Philadelphia, Pa. The "Distinctive Floors" Series. Four pamphlets 7¼ x 10¼ in. Illustrated in full color, each describing and picturing a resilient floor material, as follows:—
- Battleship Linoleum. Explains the advantages and proper use of this durable, economical material.
- Treadlite Tile. Shows a variety of colors and patterns of this adaptable cork composition flooring.
- Natural Cork Tile. Description and color plates of this super-quiet, resilient floor.
- Linoleum Specifications. Folder, 8½ x 11 in. 8 pp. Standard specifications for installation of battleship linoleum, with detailed description and explanation. Also includes copy of Federal Government Specification No. 209.
- Practical Working Specifications for installing battleship linoleum treadlite tile, and cork tile.
- Carter-Bloxonend Flooring Co.**, Keith & Perry Bldg., Kansas City, Mo. Bloxonend Flooring. Booklet 3¼ x 6¼ in. 20 pp. Illustrated. Describes uses and adaptability of Bloxonend Flooring to concrete, wood or steel construction, and advantages over loose wood blocks.
- File Folder. 9¼ x 8¼ in. For use in connection with A. I. A. system of filing. Contains detailed information on Bloxonend Flooring in condensed, loose-leaf form for specification writer and drafting room. Literature embodied in folder includes standard Specification Sheet covering the use of Bloxonend in general industrial service and Supplementary Specification Sheet No. 1, which gives detailed description and explanation of an approved method for installing Bloxonend in gymnasiums, armories, drill rooms and similar locations where maximum resiliency is required.
- Duraflex Company, Inc.**, 11 Pleasant Street, Baltimore, Md. Why They Used It in One of Boston's Finest Buildings. Typical of Character of One of the 43 Original States. Illustrated 4-page brochures, 5¼ x 8¼ in., giving data on "Duraflex" floors.
- Permanent, Easy Tread Flooring. Folder. 4 pp. 8½ x 11 in. on floor covering material.
- Specifications for Sub-Floors for "Duraflex." Folder. 11 pp. 8½ x 11 in. on base for laying "Duraflex."
- Test of Floorings. Folder. 2 pp. Report of Flooring Committee of American Hospital Association.
- Muller Co., Franklyn R.**, Waukegan, Ill. Asbestos Composition Flooring. Circular. 8½ x 11 in. Descriptions and Specifications.
- Norton Company**, Worcester, Mass. Filing Folder. 8½ x 11¼ in. 27 pp. Illustrated with drawings. Specification data for architects.
- Ritter Lumber Co., W. M.**, Columbus, Ohio. Ritter Oak Flooring. Brochure 5 x 7 in. 31 pp. Illustrated. Excellent data on floors of different kinds and of various woods.
- Beauty Begins in the Forest. Large illustrated folder on modern flooring.
- Rodd Company, The**, Century Bldg., Pittsburgh, Pa. Redwood Block Floor. Booklet. 4 x 9 in. Illustrated. Contains technical information on Rodd Floors of California Redwood Blocks. Also specifications.
- Rubberstone Corporation**, 1400 Broadway, New York City. Rubberstone: A Tile Flooring. Pamphlet. 4 pp. 8½ x 11 in. Describes and illustrates a flooring material.
- Specifications for Rubberstone Floors. Pamphlet. 4 pp. 8½ x 11 in. Complete specifications for floor of Rubberstone Tile.
- Stedman Products Company**, South Braintree, Mass. Stedman Reinforced Rubber Flooring. Booklet. 8 x 10 in. bound in "loose leaf" fashion. Discusses rubber flooring for buildings of various kinds.
- U. S. Gypsum Co.**, Chicago. Pyrobar Floor Tile. Folder. 8½ x 11 in. Illustrated. Data on building floors of hollow tile, and tables on floor loading.
- U. S. Rubber Co.**, 1790 Broadway, New York. Period Adaptations for Modern Floors. Brochure. 8 x 11 in. 60 pp. Richly illustrated. A valuable work on the use of rubber tile for flooring in interiors of different historic styles.

FOLDING PARTITIONS

- Wilson Corporation, J. G.**, 11 East 36th Street, New York, N. Y. Sectionfold and Rolling Partitions and Hygienic School Wardrobes. Catalog No. 37. Booklet 8½ x 11 in. 40 pp. Illustrated. Describes the uses of rolling and sectional partitions, particularly in schools and churches. Also the installation of Wilson school wardrobes.

An Anaconda Installation

York & Sawyer, Architects, specified and used Anaconda Brass Pipe for the new First National Bank Building, Boston.



Anaconda Brass Pipe cannot rust or clog with rust deposits. It is guaranteed sound and physically perfect by the world's largest manufacturers of Copper, Brass and Bronze. It may be used in relatively smaller sizes than iron or steel pipe—because rust cannot reduce the internal diameter of Anaconda Brass Pipe.

THE AMERICAN BRASS COMPANY

GENERAL OFFICES: WATERBURY, CONNECTICUT

Canadian Mill: ANACONDA AMERICAN BRASS LIMITED
New Toronto, Ont.

Offices and Agencies: New York, Chicago, Boston, Philadelphia, Providence, Pittsburgh, Cleveland, Detroit, Cincinnati, St. Louis, New Orleans, San Francisco

Mills and Factories: Ansonia, Conn., Torrington, Conn., Waterbury, Conn., Buffalo, N.Y., Hastings-on-Hudson, N.Y., Kenosha, Wis.

ANACONDA BRASS PIPE

Installed by leading Plumbing Contractors

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 88

**FURNACES—See Heating Equipment.
FURNITURE**

- American Seating Co.**, 14 E. Jackson Blvd., Chicago, Ill.
Ars Ecclesiastica Booklet. 6 x 9 in. 48 pp. Illustrations of church fittings in carved wood.
Theater Chairs. Booklet. 6 x 9 in. 48 pp. Illustrations of theater chairs.
- Kensington Mfg. Company**, 41 West 45th St., New York, N. Y.
Photographs and full description of hand-made furniture in all the period styles, furnished in response to a specific inquiry: Illustrated booklet indicative of the scope, character and decorative quality of Kensington furniture mailed on request.
- White Door Bed Company, The**, 130 North Wells Street, Chicago, Ill.
Booklet. 8½ x 11 in. 20 pp. Illustrated. Describes and illustrates the use of "White" Door Bed and other space-saving devices.

GARAGE EQUIPMENT

- Ramp Buildings Corporation**, 24 East 40th St., New York, N. Y.
"Building Garages for Profitable Operation." Booklet. 8½ x 11 in. 16 pp. Illustrated. Describes the d'Humy Motoramp System of Inter-floor Travel for multi-floor garages and shows the increased profits to be derived from the use of this system. Series of Informal Data Sheets on Garage Design sent on request.

GARDEN ACCESSORIES

- Davey Tree Expert Company, The**, 907 Elm St., Kent, Ohio.
When Your Trees Need The Tree Surgeon. Booklet. 8½ x 9½ in. Illustrated. Lists and explains a number of serious tree troubles of common occurrence; contrasts the scientific methods used by properly trained and conscientious men to remedy these troubles with the work of unscrupulous or untrained men.

GLASS CONSTRUCTION

- Mississippi Wire Glass**, 220 Fifth Avenue, New York.
Mississippi Wire Glass. Catalog. 3¼ x 8½ in. 32 pp. Illustrated. Covers the complete line.

GRANITE—See Stone, Building**HARDWARE**

- Cutler Mail Chute Company**, Rochester, N. Y.
Cutler Mail Chute Model F. Booklet. 4 x 9½ in. 8 pp. Illustrated.
- McKinney Mfg. Co.**, Pittsburgh, Pa.
McKinney Complete Garage Hardware Sets. Catalog. 6¼ x 10 in. 20 pp. Illustrated. Describes full line of complete garage hardware sets for all kinds of entrances, with views of typical entrances and sketches.
- McKinney Hinges and Butts**. General Catalog. 6¼ x 10 in. Illustrates and describes complete line of McKinney wrought builders' hardware products, including hinges, butts, door hangers and track, latches, garage hardware and specialties.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.
Distinctive Garage Door Hardware. Booklet. 8½ x 11 in. 65 pp. Illustrated. Complete information accompanied by data and illustrations on different kinds of garage door hardware.
- Sargent & Company**, New Haven, Conn.
Sargent Locks and Hardware. Architects' Edition. 9 x 12 in. 762 pp. Illustrated. The latest complete catalog of Locks and Hardware.
- Details to Which Standard Hardware Can Be Applied. Booklet. 6 pp. 9 x 12 in. Illustrated. Treats with diagrams, portions of doors and windows to which hardware can be applied.
- Vonnegut Hardware Co.**, Indianapolis, Ind.
Von Duprin Self-Releasing Fire Exit Devices. Catalog 12F. 8 x 11 in. 41 pp. Illustrated.
- Saving Lives. Booklet. 3¼ x 6 in. 16 pp. Illustrated. A brief outline why Self-Releasing Fire Exit Devices should be used.

HEATING EQUIPMENT

- American Radiator Company**, 104 West 42nd Street, New York City.
Ideal Water Tube Boilers. Booklet. 7¼ x 10½ in. 32 pp. Illustrated. Complete data on a valuable line of boilers of the water-tube type.
- Ideal Arcola Radiator Warmth**. Brochure. 6¼ x 9¼ in. Illustrated. Deals with the use of radiators in domestic buildings.
- Ideal Type "A" Heat Machine**. Booklet. 7¼ x 10½ in. 32 pp. Illustrated. A brochure on heating apparatus for residences.
- Ideal Smokeless Boilers**. Catalog. 7¼ x 10½ in. Illustrated. Fully explains a boiler free from the objection of causing smoke.
- Ideal Arco Round Boiler**. Vento (small homes, garages and other small detached buildings).
- Ideal Boilers for Oil Burning**.
- Bryant Heater & Mfg. Co., The**, 962 East 72nd St., Cleveland, O.
Hand Book on Water Heating by Gas. 8½ x 11 in. 16 pp. Illustrated. Bryant Gas Boilers. Bulletin 309, for AIA File No. 29 D2. Contains valuable information on hot water, steam and vapor heating; data to determine quickly the size of heating plant for any building; also dimensions, weights, fittings furnished and other data of interest. Other descriptive literature available. Comprehensive handbook in preparation.
- Hand Book on House Heating by Gas**. 8½ x 11 in. 8 pp. Illustrated. Bryant Automatic Hot Water Storage Systems. Bulletin 308, for AIA File No. 30 C1. Contains complete information on water heating systems, weights, dimensions, etc. Other descriptive material available. Comprehensive handbook in preparation.
- James B. Clow & Sons**, 534 S. Franklin St., Chicago, Ill.
Gastream. Catalog. 6 x 9 in. 16 pp. Illustrated. New radiator using gas for fuel.
- C. A. Dunham Company**, 230 East Ohio Street, Chicago, Ill.
Dunham Radiator Trap. Bulletin 101. 8 x 11 in. 12 pp. Illustrated. Explains working of this detail of heating apparatus.
- Dunham Packless Radiator Valves. Bulletin 104. 8 x 11 in. 8 pp. Illustrated. A valuable brochure on valves.
- Dunham Return Heating System. Bulletin 109. 8 x 11 in. Illustrated. Covers the use of heating apparatus of this kind.

HEATING EQUIPMENT—Continued

- Dunham Vacuum Heating System**. Bulletin 110. 8 x 11 in. 12 pp. Illustrated.
- Excelsa Specialty Works**, 119 Clinton St., Buffalo, N. Y.
Excelsa Water Heater. Booklet. 12 pp. 3 x 6 in. Illustrated. Describing the new Excelsa method of generating domestic hot water in connection with heating boilers. (Firepot Coil eliminated.)
- The Fulton Company**, Knoxville, Tenn.
Sylphon Temperature Regulators. Bulletin T-103. 8½ x 11 in. 16 pp. Complete data on Sylphon temperature regulators for air and liquids. Catalog 100, complete line Sylphon Heating Specialties.
- Damper Regulators**. Air and Vent Valves. Catalog No. 100. 3¼ x 6¼ in. Sylphon Damper Regulators for steam, hot water and vapor systems. Sylphon Air and Vent Valves.
- Illinois Engineering Co.**, Racine Ave., at 21st St., Chicago, Ill.
Vapor Heat Bulletin 21. 8½ x 11 in. 32 pp. Illustrated. Contains new and original data on Vapor Heating. Rules for computing radiation, pipe sizes, radiator tappings. Steam table showing temperature of steam and vapor at various pressures, also description of Illinois Vapor Specialties.
- International Heater Company**, Utica, N. Y.
New International Economy Smokeless Boiler. Catalog, Form 1751-F. Copy will be sent on request.
- Johnson Service Company**, 149 Michigan St., Milwaukee, Wis.
Regulation of Temperature and Humidity. Booklet. 11¼ x 8½ in. 64 pp. Illustrated. Describes Johnson system of pneumatic, automatic regulation of temperature and humidity, and illustrates thermostats, valves, air compressors, dampers and other parts.
- Johnson Electric Thermostats, Valves and Controllers**. Booklet. 6¼ x 3¼ in. 24 pp. Illustrated. Excellent plates showing electric thermostats and controllers.
- Kelsey Heating Company**, James St., Syracuse, N. Y.
Booklet No. 5. 4 x 9 in. 32 pp. Illustrated. A dealers' booklet showing the Kelsey Warm Air Generator Method of warming and distributing air. Gives dimensions, heating capacities, weights, kind of coal recommended and shows the mechanical and gravity systems of heating homes, churches and schools.
- Monroe Pipeless Booklet**. 4½ x 8 in. 20 pp. Illustrated.
- Monroe Tubular Heater**. Booklet. 4½ x 8 in. 20 pp. Illustrated.
- General Booklet giving capacities, dimensions, weights, etc.
- Syracuse Pipeless Booklet**. 4½ x 8 in. 12 pp. Illustrated. General Booklet giving sizes and capacities.
- Kewanee Boiler Co.**, Kewanee, Ill.
Kewanee on the Job. Catalog. 8½ x 11 in. 80 pp. Illustrated. Showing installations of Kewanee boilers, water heaters, radiators, etc.
- Catalog No. 78. 6 x 9 in. Illustrated. Describes Kewanee Fire-box Boilers with specifications and setting plans.
- Catalog No. 79. 6 x 9 in. Illustrated. Describes Kewanee power boilers and smokeless tubular boilers with specifications.
- Mueller Co.**, Decatur, Ill.
Catalog G. 8 x 11 in. 316 pages. Profusely illustrated. Contains full data on plumbing, water and gas brass goods, including valves, faucets, traps, regulators, built-in bath equipment, and automatic systems of hot water control. Complete details are presented with a number of data sheets showing roughing-in measurements for built-in bath equipment.
- Nash Engineering Company**, South Norwalk, Conn.
No. 37. Devoted to Jennings-Hytor Return Line Vacuum Heating Pumps, electrically driven, and supplied in standard sizes up to 300,000 square feet equivalent direct radiation.
- No. 16. Dealing with Jennings Hytor Air Line Heating Pumps.
- No. 17. Describing Jennings Hytor Condensation Pumps, sizes up to 70,000 square feet equivalent direct radiation.
- No. 25. Illustrating Jennings Return Line Vacuum Heating Pumps. Size M, for equivalent direct radiation up to 5,000 square feet.
- National Radiator Company**, Johnstown, Pa.
Aero Radiators; Beauty and Worth. Catalog 34. Booklet 6 x 9 in. 20 pp., describing and illustrating radiators and accessories.
- Richardson & Boynton Company**, New York City.
Richardson Round Smokeless Boilers. Booklet. 8 x 10½ in. Illustrating and describing boilers for burning soft coal economically and without smoke or soot.
- The Thatcher Company**, 39-41 St. Francis St., Newark, N. J.
Boilers—Boiler Catalog 4¼ x 8, 80 pages illustrated. Explains the advantages and installation of Thatcher Boilers. Includes: Round Boilers, steam and hot-water. Sectional end-feed, steam and hot-water. Progress side-feed sectional steam and hot-water. Hot-water supply Heaters, Garage Heaters.
- Furnaces—Furnace Catalog 4¼ x 8, 24 pages, illustrated. Describes the merits of Thatcher Furnaces and their economical fuel consumption. Includes: Celebrated Thatcher Tubular Furnaces. Meteor Pipe and Pipe-less Furnaces. Smokeless Furnaces and School-room Heaters.
- Trane Co., The**, La Crosse, Wis.
Bulletin 14. 16 pp. 8½ x 10½ in. Cover the complete line of Trane Heating Specialties, including Trane Bellows Traps, and Trane Bellows Packless Valves.
- Bulletin 20. 24 pp. 8½ x 10½ in. Explains in detail the operation and construction of Trane Condensation, Vacuum, Booster, Circulating, and similar pumps.
- Utica Heater Company**, Utica, N. Y.
Imperial Round and Square Boilers and Supplies. Catalog. 3¼ x 6¼ in. Gives complete data on small heaters.
- Special Folders. 8½ x 11 in. "Warmth and Comfort," describing the scientifically correct NEW IDEA pipeless furnaces. "SUPERIOR Warm Air Pipe Furnaces," a standard line of heating equipment for over forty years. "SUPER-SMOKELESS Pipe and Pipeless Furnaces," a new and remarkably efficient warm air heater, burning cheap soft coal without smoke—utilizing the principle of the Bunsen Burner.

These 26 leading Boiler Manufacturers all use Sylphon Damper Regulators as Standard Equipment

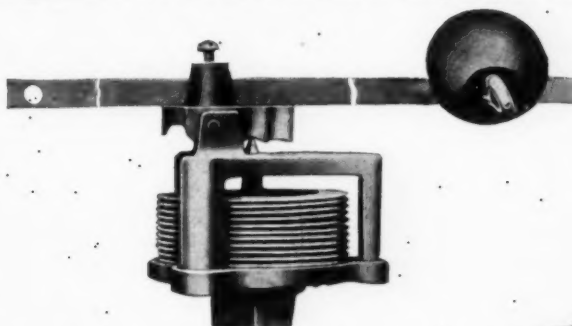
RICHMOND

PIERCE-PENCO

NATIONAL

OIL CITY

IMPERIAL



No. 22—Sylphon Damper Regulator for low pressure steam boilers

No. 924
Sylphon
Steam Damper
Regulator, extra
sensitive type

Abendroth	Keystone
Ames	Kewanee
Birchfield	L-O
Burnham	Novelty
Coil	National
Coatesville	Oil City
Fitzgibbons-Ontario	Otis-Sawyer-Economy
Floral City	Pierce-Peeco
Freed	Richardson
Heggie-Simplex	Ross
Imperial	Star
International-Economy	Thatcher
Keysco	West Coast

No. 45-A
Sylphon
Hot-Water
Damper
Regulator

THATCHER

RICHARDSON

INTERNATIONAL ECONOMY

BURNHAM

BIRCHFIELD

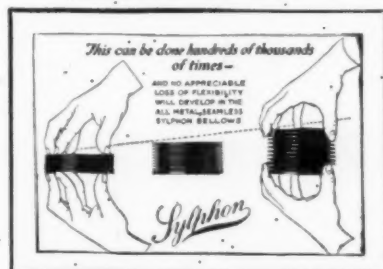
Why Do They Do It?

Because they have found that no damper regulator will last as long or regulate so positively and accurately as Sylphon Damper Regulators.

Because only Sylphon Damper Regulators contain the original and genuine, all-metal, seamless Sylphon bellows as their diaphragm. With its everlasting sensitiveness and flexibility, it opens and closes the drafts in direct response to steam pressure or water temperature, guaranteeing even heating with minimum consumption of fuel.

Because Sylphon Damper Regulators last as long as the boiler. They can be specified for any make of boiler—but be sure you get the genuine—made only by The Fulton Company.

Ask for Bulletin FDR-5



THE FULTON COMPANY KNOXVILLE, TENN.

ORIGINATORS AND PATENTEES OF THE SYLPHON BELLOWS

Sales Offices in: NEW YORK, CHICAGO, DETROIT, BOSTON, PHILADELPHIA, and in all principal cities of the U. S.

European representatives: CROSBY VALVE & ENGINEERING CO., LTD., 41-42 Foley Street, London, W. I., England

Canadian representatives: DARLING BROTHERS, LTD., 120 Prince Street, Montreal, Canada

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 90

HEATING EQUIPMENT—Continued

Utica Imperial SUPER-SMOKELESS Boiler. Catalog. 8½ x 11 in. Consists of the following seven bulletins, either loose or bound together: (1) School Heating Bulletin. (2) Public Building Bulletin. (3) Theater Heating Bulletin. (4) Churches and Religious Institutions. (5) Residences, Apartments and Hotels. (6) Offices, Industrial Buildings and Garages. (7) Technical Bulletin describing patented Bunsen Burner design and construction of the SUPER-SMOKELESS BOILER, which burns the cheapest grades of soft coal smokelessly and operates equally well with hard coal, coke or fuel oil.

HEAT REGULATORS—See Heating Equipment HEATING AND VENTILATING

Thatcher Furnace Co., 39-41 St. Francis St., Newark, N. J.
Thatcher Heating and A Few Installations, 25 pp. 6 x 9 in. Illustrated. Contains photos of various types of buildings in which Thatcher Heaters are installed together with cuts and description of Thatcher Heaters.
History of Heat, 15 pp. 8 x 5 in. Illustrated. Tracing the evolution of heat from its earliest stages.

HOISTS—See Ash Hoists

HOLLOW TILE—See Tile, Hollow

HOSPITAL EQUIPMENT

The International Nickel Company, 67 Wall St., New York, N. Y.
Hospital Applications of Monel Metal. Booklet. 8½ x 11½ in. 16 pp. Illustrated. Gives types of equipment in which Monel Metal is used, reasons for its adoption, with sources of such equipment.

The Kny-Scheerer Corporation of America, 119 Seventh Ave., New York.

Hospital Equipment, 16th Edition. 7¼ x 10¼ in. 232 pp. Illustrated. Complete description of Hospital and Surgical Furniture, Hospital Appliances including Operating Tables, Cabinets, Sterilizers for Water, Dressing and Instruments, also Hydrotherapeutic Apparatus.

Surgical Sundries. Second Edition. Booklet. 7¼ x 10¼ in. 48 pp. Illustrated. A complete line of glassware, enamelware, rubber goods, restraint apparatus, instrument sterilizers, sputum cups, wheel chairs and sick room comforts.

Electro-Medical. 25th Edition. Booklet. 7¼ x 10¼ in. 160 pp. Illustrated. A complete line of Albee Bone Sets, Apparatus for AC and DC, Cystoscopes, Heat Magnets, Vibrators, Compressors, Electric Light Baths, High Frequency Apparatus and X-Ray Apparatus and Accessories.

INCINERATORS

The Kerner Incinerator Company, 1029 Chestnut St., Milwaukee, Wis.

The Kernerator. Booklet. 5½ x 9¼ in. 40 pp. Illustrated. Describes principle and design of the Kernerator, guarantee and service, also gives illustrations of buildings where it has been installed, and testimonials.

Sanitary Elimination of Household Waste. Booklet. 4 x 9 in. 16 pp. Illustrated. Shows process, installations and advantages of the Kernerator.

Sanitary Disposal of Waste in Hospitals. Booklet. 4 x 9 in. 12 pp. Illustrated. Shows how this necessary part of hospital service can be taken care of by the Kernerator.

INSULATION

Armstrong Cork & Insulation Co., Pittsburgh, Pa.
Corkboard Insulation. Brochure. 6¼ x 9¼ in. Illustrated. Fully discusses properties of corkboard and its uses in insulation of cold storage rooms, refrigerators, residences, apartment houses.

Armstrong Cork & Insulation Co., Pittsburgh, Pa.
Nonpareil Cork Covering. Booklet 48 pp. 7½ x 10½ in. Illustrated. Complete treatment of cold pipe installation.

Filing Folder for Pipe Covering Data. Made in accordance with A. I. A. rules.

Insulation of Dwellings with Armstrong's Corkboard, 7 x 10½ in. 40 pages. Illustrated.

Bishopric Manufacturing Co., 103 Este Ave., Cincinnati, Ohio.
Specifications and Working Details. Booklet. 7¼ x 10¼ in. Illustrated. Contains plainly written instructions for the use of stucco, stucco base, plaster base and insulation base.

National Steel Fabric Co., Union Trust Building, Pittsburgh, Pa.
Building a Permanent Home. Brochure 4 x 9 ins. 20 pp. Discusses the use of steel materials in domestic buildings in a way likely to interest architects and builders.

Sales Manual. Loose leaf, 8½ x 11 ins. Complete data and specifications regarding the use of this company's products.

Philip Carey Co., The, Cincinnati, Ohio.
Carey Asbestos and Magnesia Products. Catalog. 6 x 9 in. 72 pp. Illustrated.

Celotex Company, The, 645 N. Michigan Ave., Chicago, Ill.
The Hidden Comfort of Costly Homes. Booklet 8½ x 11 in. Celotex Specifications. Booklet 8½ x 11 in.

Johns-Manville, Inc., Madison Ave. and 41st St., New York, N. Y.
Johns-Manville Service to Power Users. Catalog. 8½ x 11 in. 150 pp. Illustrated. Contains valuable data on all forms of insulation, packages, steam traps, high temperature cements, brake locks and linings, also general technical data.

United States Mineral Wool Co., 280 Madison Ave., New York.
The Uses of Mineral Wool in Architecture. Booklet. 5¼ x 6¾ in. 24 pp. Illustrated. Describes properties of mineral wool as insulation against heat, frost, sound. Specifications and section drawing for use as a fireproofing. Rules for estimate and cost.

KITCHEN EQUIPMENT

Standard Gas Equipment Corporation, 18-20 East 41st Street, New York, N. Y.

VULCAN Gas Ranges and Appliances. Booklet. 5 x 8 in. 50 pp. Illustrated. Describes complete line, including VULCAN SMOOTH TOP Compact Cabinet Gas Ranges for kitchens in the home.

VULCAN Gas Equipment for Hotels, Hospitals, Restaurants, etc. Booklet. 5 x 8 in. 45 pp. Illustrated. Equipment for heavy-

KITCHEN EQUIPMENT—Continued

duty cooking requirements, with information of value to architects in planning kitchens.

The International Nickel Company, 67 Wall St., New York, N. Y.
Hotels, Restaurants and Cafeteria Applications of Monel Metal. Booklet. 8½ x 11 in. 32 pp. Illustrated. Gives types of equipment in which Monel Metal is used, with service data, and sources of equipment.

Mueller Co., Decatur, Ill.
Catalog G; 8 x 11 in. 316 pages. Profusely illustrated. Contains full data on plumbing, water and gas brass goods, including valves, faucets, traps, regulators, built-in bath equipment, and automatic systems of hot water control. Complete details are presented with a number of data sheets showing roughing-in measurements for built-in bath equipment.

Pick & Company, Albert, 208 W. Randolph St., Chicago, Ill.
School Cafeteria. Portfolio. 17 x 11 in. 44 pp. Illustrated. An exhaustive study of the problems of school feeding, with copious illustrations and blue prints. Very valuable to the architect.
School Cafeterias. Booklet. 9 x 6 in. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.

Kitchen Equipment. Booklet. 9 x 6 in. Illustrated. Photographs and descriptions of Hotel, Club and Hospital kitchens with treatise on plans and equipment of efficient kitchens.

Electric Kitchen Equipment. Booklet. 8½ x 11½ in. Illustrated. Photographs and descriptions of PIX "Master-Made" ranges, ovens, etc., for Hotels and Restaurants.

Hotel, Apartment Building, Club and Institution Installations. Portfolio. 17 x 11 in. 100 pp. Shows, mostly by plates, how the Albert Pick Company equips hotels completely from top to bottom.

Equipment for Cafeterias, Lunch Rooms, Restaurants, and Dining Rooms. Portfolio. 17 x 11 in. 86 pp. Illustrated. The last word in Cafeteria equipment to meet all requirements.

The Thatcher Company, 39-41 St. Francis St., Newark, N. J.
Ranges—Range Catalog 4¼ x 8; 24 pages illustrated. A brochure of all Thatcher Ranges. Includes:
Twin-fire combination Coal and Gas Ranges.
Single and Double-oven Coal Ranges.
Thatcher Enameled Gas Ranges.
Mascot Slip Ranges and Laundry Heaters.

LABORATORY EQUIPMENT

Kewaunee Manufacturing Company, 141 Lincoln St., Kewaunee, Wis.
Kewaunee Book of Laboratory Furniture. Catalog. 7 x 10 in. 408 pp. Illustrated. Science and Vocational Laboratory Furniture for schools, colleges, technical institutes, hospitals, etc., including floor plans, illustrations of buildings and equipped laboratories, illustrations of equipment engineering data for mechanical ventilation and illustrations of special plumbing fixtures for laboratory use. A supplement is also issued for this work.

LANTERNS

Todhunter, Arthur, 414 Madison Ave., New York.
Hand-Wrought Lanterns. Booklet. 5¼ x 6¼ in. 20 pp. Illustrated in Black and White. With price list. Lanterns appropriate for exterior and interior use, designed from old models and meeting the requirements of modern lighting.

LATH, METAL AND REINFORCING

The General Fireproofing Company, Youngstown, Ohio.
Herringbone Metal Lath Handbook. 8½ x 11 in. 32 pp. Illustrated. Standard specifications for Cement Stucco on Herringbone.

Rigid Metal Lath and interior plastering.

Milwaukee Corrugating Co., Milwaukee, Wis.
The Milcor Manual. Booklet 8½ x 11 in. 64 pp. Illustrated. Covers Milcor methods and materials, metal lath, corner beads, steel domes, channels, etc.

National Steel Fabric Co., Union Trust Building, Pittsburgh, Pa.
Building a Permanent Home. Brochure 4 x 9 ins. 20 pp. Discusses the use of steel materials in domestic buildings in a way likely to interest architects and builders.

Sales Manual. Loose leaf, 8½ x 11 ins. Complete data and specifications regarding the use of this company's products.

Northwestern Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.
Northwestern Expanded Metal Products. Booklet. 8½ x 10½ in. 16 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated, Plaster-Save and Longspan lath channels, etc.

LAUNDRY CHUTES

The Pfaunder Company, 257 Cutler Building, Rochester, N. Y.
Pfaunder Glass-Lined Steel Laundry Chutes. Booklet. 5¼ x 7¾ in. 16 pp. Illustrated. A beautifully printed brochure describing in detail with architects' specifications THE PFAUNDER GLASS-LINED STEEL LAUNDRY CHUTES. Contains views of installations and list of representative examples.

LIGHTING EQUIPMENT

Curtis Lighting, Inc., Chicago, Ill.
Catalog 393. 8 x 10 in. 34 pp. Illustrated. Describes and illustrates X-Ray reflectors for show cases and windows, and lighting fixtures for interior illumination of stores.

Curtis Lighting, Inc., 1119 West Jackson Boulevard, Chicago, Ill.
Lighting Specifications—A. I. A. File 31 F. Looseleaf. 8½ x 11 in. Architectural detail plates on church, restaurant and home lighting. Complete details, illustrations and helpful ideas on direct and indirect illumination. Sent free to any registered architect who requests them on his own letterhead.

Pittsburgh Reflector Co., Pittsburgh, Pa.
Cove Lighting. Booklet. 8½ x 11 in. 24 pp. Gives complete data on lighting of this type.
Show Window Lighting. Booklet. 8½ x 11 in. 28 pp. A most useful work on lighting these important areas.

LOCKERS

Hart & Hutchinson Company, The, New Britain, Conn.
Steel Lockers, Cabinets and Partitions. Catalog. 8 x 11 in. 16 pp. of complete line of steel partitions, lockers and cabinets for different household and business purposes.

EVERY ROOF NEEDS INSULATION

20,000 sq. ft. of Armstrong's Corkboard being laid on concrete roof deck of Custer School, Detroit, Mich.



Cork Insulated Roofs Make Top Floors Comfortable

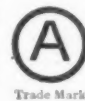
TOP floors are hard to heat in winter because too much heat goes out through the roof. They are hot in summer because too much heat comes in. By insulating the roof with Armstrong's Corkboard the flow of heat can be virtually stopped and top floors made as comfortable as the floors below.

Armstrong's Corkboard has so low a heat conductivity that its use in adequate thickness makes the roof almost impervious to heat. It retains the warmth in upper floors in winter, and in summer effectively shuts out the heat of the sun; top story temperatures vary hardly a degree from those on intermediate floors. In addition, Armstrong's Corkboard saves fuel and ab-

solutely prevents ceiling condensation.

Armstrong's Corkboard is easily laid over any flat or sloping roof deck, concrete, tile or wood. It is firm and rigid and affords a substantial base for the roofing which is laid over it in the regular way. It is non-absorbent of moisture and does not shrink, swell or buckle. It is a fire retardant.

Detailed information about the insulation of any type of roof will be supplied upon request. Armstrong Cork & Insulation Company (Division of Armstrong Cork Company), 205 Twenty-fourth Street, Pittsburgh, Pa. In Canada, McGill Building, Montreal.



Trade Mark

Made of pure cork in boards
12 x 36 inches—from 1 inch
to 6 inches thick.

Branches in the Principal Cities

Armstrong's Corkboard Insulation

for the Roofs of All Kinds of Buildings

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 92

MAIL CHUTES

Cutler Mail Chute Company, Rochester, N. Y.
Cutler Mail Chute Model F. Booklet. 4 x 9/4 in. 8 pp. Illustrated.

MANTELS

Arthur Todhunter, 414 Madison Avenue, New York, N. Y.
Georgian Mantels. New Booklet. 24 pp. 5 1/4 x 6 1/4 in. A fully illustrated brochure on eighteenth century mantels. Folders give prices of mantels and illustrations and prices of fireplace equipment.

MARBLE

The Georgia Marble Company, Tate, Ga. New York Office, 1328 Broadway.
Why Georgia Marble is Better. Booklet. 3 1/4 x 6 in. Gives analysis, physical qualities, comparison of absorption with granite, opinions of authorities, etc.
Convincing Proof. Booklet. 3 1/4 x 6 in. 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of Architects and Sculptors.

METAL LATH—See Lath, Metal and Reinforcing

METALS

American Sheet & Tin Plate Co., Frick Building, Pittsburgh, Pa.
Reference Book. Pocket Ed. 2 1/4 x 4 1/2 in. 168 pp. Illustrated. Covers the complete line of Sheet and Tin Mill Products.
Apollo and Apollo-Keystone Galvanized Sheets. Catalog. 8 1/2 x 11 in. 20 pp. Illustrated.
Research on the Corrosion Resistance of Copper Steel. Booklet. 8 1/2 x 11 in. 24 pp. Illustrated. Technical information on results of atmospheric corrosion tests of various sheets under actual weather conditions.

Chase Metal Works, Waterbury, Conn.

How to Order Brass. Booklet. 8 1/4 x 5 1/2 in. Illustrated. Tells just how to order brass—about alloys, temper, tolerances most suitable for various uses. Warns against the usual mistakes and troubles in ordering. Contains complete tables of alloys, tempers, tolerances, uses, etc.
Chase Diamond Booklet. 11 1/4 x 9 in. 8-16 pp. Illustrated. Periodical house organ issued once a month or so. Contains articles, pictures, news items of interest to customers, employees and brass industry in general. Ask to be put on the mailing list.

The International Nickel Company, 67 Wall St., New York, N. Y.
The Choice of a Metal. Booklet. 6 1/4 x 3 1/4 in. 16 pp. Illustrated. Monel Metal—its qualities, use and commercial forms, briefly described.

METAL TRIM—See Doors and Trim, Metal

MILL WORK—See also Wood

Curtis Companies Service Bureau, Clinton, Iowa.
Architectural Interior and Exterior Woodwork. Standardized. Book. 9 x 11 1/2 in. 240 pp. Illustrated. This is an Architects' Edition of the complete catalog of Curtis Woodwork, as designed by Trowbridge & Ackerman. Contains many color plates.
Better Built Homes, Vols. XV-XVIII incl. Booklet. 9 x 12 in. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects for the Curtis Companies.
Curtis Details. Booklet. 19 1/2 x 23 1/2 in. 20 pp. Illustrated. Complete details of all items of Curtis woodwork, for the use of architects.

Roddie Lumber & Veneer Company, Marshfield, Wis.

Roddie Doorman. Booklet. 10 1/4 x 7 1/4 in. 12 pp. Illustrated. Describes and illustrates the use of Roddie Doors for residences, clubs, hotels, etc.

Hartmann-Sanders Company, 2155 Elston Ave., Chicago, Ill.
Column Catalog. 7 1/2 x 10 in. 48 pp. Illustrated. Contains prices on columns 6 to 36 in. diameter, various designs and illustrations of columns and installations.
The Pergola Catalog. 7 1/2 x 10 in. 64 pp. Illustrated. Contains illustrations of pergola lattices, garden furniture in wood and cement, garden accessories.

MORTAR COLORS

Clinton Metallic Paint Co., Clinton, N. Y.
Clinton Mortar Colors. Folder. 8 1/2 x 11 in. 4 pp. Illustrated in color, gives full information concerning Clinton Mortar Colors with specific instructions for using them.
Color Card. 6 1/4 x 3 1/4 in. Illustrates in color the ten shades in which Clinton Mortar Colors are manufactured.

PAINTS, STAINS, VARNISHES AND WOOD FINISHES

Cabot, Inc., Samuel, Boston, Mass.
Cabot's Creosote Stains. Booklet. 4 x 8 1/2 in. 16 pp. Illustrated.
Eagle-Picher Lead Company, The, 208 S. La Salle St., Chicago, Ill.
Specifications for Painting Structural Steel and Iron. Booklet. 9 1/2 x 11 1/2 in. 7 pp. Not illustrated. A set of specifications which embody the latest development in this field as revealed by the research department of The Eagle-Picher Lead Company in the light of their eighty-one years' experience; enclosed in folder 13 x 2 in., ready for filing.
Fighting Rust with Sublimed Blue Lead. Book. 80 pp. Illustrated. 5 1/2 x 8 1/2 in. An excellent addition to one's technical library, well-bound in a stiff cover. An assemblage of scientific facts concerning the theory of corrosion of iron and steel and the prevention of rust with Sublimed Blue Lead.
Chemical Analysis of Lead and Its Compounds. Book. 5 1/2 x 8 1/2 in. 160 pp. Illustrated. A treatise on the latest methods of analysis adopted by the leading laboratories which must examine lead and its compounds from an analytical standpoint.

Lead Tree Chart. 9 x 11 1/2 in. 1 p. Framed Chart. Not illustrated. A chart reflecting all the uses of lead, from crude ore to the finished products.
Zinc Tree Chart. 9 x 11 1/2 in. 1 p. Framed Chart. Not illustrated. A chart reflecting all the uses of zinc, from the ore to the finished product.
Rust-proofing Pamphlet. 3 x 5 in. 16 pp. Illustrated. Of interest to anyone connected in any way with steel construction.

PAINTS, STAINS, VARNISHES & WOOD FINISHES—Continued

The Glidden Company, Cleveland, Ohio.

More Daylight. 8 x 10 1/2 in. 20 pp. Portraying by illustrations and text the need and methods of modern mill painting.
Glidden Specification Book. 8 x 10 1/4 in. 12 pp. Complete architectural specifications for Glidden Paints and Varnishes, including Ripolin. Directions for the proper finishing of wood, metal, plaster, concrete, brick and other surfaces.

Martin Varnish Co., 2500 Quarry St., Chicago, Ill.

Architectural Specifications. Booklet. 8 1/2 x 11 in. 20 pp. Illustrated. Complete guide for Architects in specifying Martin Varnish Products.
Your Floors. Booklet. 5 x 7 in. 20 pp. Illustrated. Explains fully how to finish all kinds of floors and woodwork with Martin's Pure Varnish.

Devos & Reynolds Co., Inc., 101 Fulton Street, New York.

Architects' Paint & Varnish Manual, containing in concrete form architects' educational letters.

National Lead Company, 111 Broadway, New York, N. Y.

Handy Book on Painting. Book. 5 1/4 x 3 1/4 in. 100 pp. Gives directions and formulae for painting various surfaces of wood, plaster, metals, etc., both interior and exterior.

Red Lead in Paste Form. Booklet. 6 1/4 x 3 1/4. 16 pp. Illustrated. Directions and formulae for painting metals.

Came Lead. Booklet. 8 1/4 x 6 in. 12 pp. Illustrated. Describes various styles of lead comes.

Cinch Anchoring Specialties. Booklet. 6 x 3 1/2 in. 20 pp. Illustrated. Describes complete line of expansion bolts.

New Jersey Zinc Company, 160 Front St., New York, N. Y.

Zinc as a Paint Pigment. Technical Treatise on the subject, with illustrations and reports of tests, 24 pp. 6 x 9 in.

Mapaz No. 1 Painting Handbook. Pocket size combination handbook and note book containing valuable information on Zinc Oxide and its use in paint. Other data of interest to architects, including lace stencils, color formulae, etc.

The Ripolin Company, Cleveland, Ohio.

Ripolin Specifications. Book. 8 x 10 1/4 in. 12 pp. Complete specifications and general instructions for the application of Ripolin, the original Holland enamel paint. Also directions for proper finishing of wood, metal, plaster, concrete, brick and other surfaces.

Why Ripolin Has an International Reputation. 8 x 10 1/4 in. 24 pp. Designed for the architect's files to illustrate the many varied uses of Ripolin Enamel Paint in all parts of the world. Profusely illustrated.

Ruberoid Co., The (formerly the Standard Paint Co.), 95 Madison Avenue, New York, N. Y.

Preservative Coating. Booklet. 6 x 9 in. 15 pp. Illustrated. Presents in a concise manner the properties and uses of the Ruberoid Company's various paint preparations.

Sherwin-Williams Company, 601 Canal Rd., Cleveland, Ohio.

Painting Concrete and Stucco Surfaces. Bulletin No. 1. 8 1/2 x 11 in. 8 pp. Illustrated. A complete treatise with complete specifications on the subject of Painting of Concrete and Stucco Surfaces. Color chips of paint shown in bulletin.

Enamel Finish for Interior and Exterior Surfaces. Bulletin No.

2. 8 1/2 x 11 in. 12 pp. Illustrated. Thorough discussion, including complete specifications for securing the most satisfactory enamel finish on interior and exterior walls and trim.

Painting and Decorating of Interior Walls. Bulletin No. 3.

8 1/2 x 11 in. 20 pp. Illustrated. An excellent reference book on Flat Wall Finish, including texture effects, which are taking the country by storm. Every architect should have one on file.

Protective Paints for Metal Surfaces. Bulletin No. 4. 8 1/2 x 11 in. 12 pp. Illustrated. A highly technical subject treated in a simple, understandable manner.

Sonneborn Sons, Inc., L., Dept. 4, 116 Fifth Avenue, New York.
Paint Specifications. Booklet. 8 1/2 x 10 1/4 in. 4 pp.

PANELING—See Millwork

PARTITIONS

Empire Steel Partition Co., College Point, N. Y.

Steel office partitions. Write for further information and Folder No. 4.

Hauserman Company, E. F., Cleveland, Ohio

Hollow Steel Standard Partitions. Various folders, 8 1/2 x 11. Illustrated. Give full data on different types of steel partitions, together with details, elevations and specifications.

Improved Office Partition Company, 25 Grand St., Elmhurst, L. I.

Telesco Partition. Catalog. 8 1/4 x 11 in. 14 pp. Illustrated. Shows typical offices laid out with Telesco partitions, cuts of finished partition units in various woods. Gives specifications and cuts of buildings using Telesco.

Detailed Instructions for erecting Telesco Partitions. Booklet. 24 pp. 8 1/2 x 11 in. Illustrated. Complete instructions, with cuts and drawings, showing how easily Telesco Partition can be erected.

Richards-Wilcox Mfg. Co., Aurora, Ill.

Partitions. Booklet. 7 x 10 in. 32 pp. Illustrated. Describes complete line of track and hangers for all styles of sliding, parallel, accordion and flush-door partitions.

U. S. Gypsum Co., Chicago.

Pyrobar Partition and Furring Tile. Booklet. 8 1/4 x 11 in. 24 pp. Illustrated. Describes use and advantages of hollow tile for inner partitions.

PIPE

American Brass Company, Waterbury, Conn.

Bulletin B-1. Brass Pipe for Water Service. 8 1/2 x 11 in. 28 pp. Illustrated. Gives schedule of weights and sizes (I.P.S.) of seamless brass and copper pipe, shows typical installations of brass pipe, and gives general discussion of the corrosive effect of water on iron, steel and brass pipe.

Chase Metal Works, Waterbury, Conn.

Why Brass Pipe. Booklet. 6 1/4 x 3 1/4 in. 6 pp. Small pamphlet showing advantages of brass pipe in concise form, together with table of standard sizes and weights.

Clow is Moving Into the World's Largest Plumbing Plant



DURING the month of December, James B. Clow & Sons moves into its commodious new quarters at Lake, Talman and Fulton Streets, Chicago—the largest plumbing plant in the world.

Three large buildings, modern and roomy have been specially fitted for the efficient carrying on of Clow's plumbing business. The total length of the entire plant is 724 feet—width is 147 feet—total ground floor space is over 80,000 square feet.

Storage and shipping facilities are beyond parallel. For example, the capacity of the new steel and wrought iron pipe warehouse is 3500 tons. The switch track accommodates ten cars. And, twelve trucks can be loaded simultaneously.

With these, and the many other facilities that the new plant affords, the Clow organization hopes to make even better the service which has been synonymous with the name Clow for the past forty-eight years.

JAMES B. CLOW & SONS

534-546 S. Franklin Street, Chicago ~ Sales Offices in Principal Cities

After Jan. 1st, direct mail to P. O. Box N. N.

PREFERRED FOR EXACTING PLUMBING SINCE 1878

CLOW



SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 94

PIPE—Continued

- Clow & Sons, James B.**, 534 S. Franklin St., Chicago, Ill.
Catalog "A," 4 x 6 1/4 in., 700 pp. Illustrated. Shows a full line of steam, gas and water works supplies.
- National Tube Co.**, Frick Building, Pittsburgh, Pa.
"National" Bulletin No. 2. Corrosion of Hot Water Pipe. (8 1/2 x 11 in.; 24 pp.) Illustrated. In this bulletin is summed up the most important research dealing with hot water systems. The text matter consists of seven investigations by authorities on this subject.
- "National" Bulletin No. 3. The Protection of Pipe Against Internal Corrosion (8 1/2 x 11 in., 20 pp.) Illustrated. Discusses various causes of corrosion, and details are given of the deactivating and deaerating systems for eliminating or retarding corrosion in hot water supply lines.
- "National" Bulletin No. 25. "National" Pipe in Large Buildings. 8 1/2 x 11 in., 88 pp. This bulletin contains 254 illustrations of prominent buildings of all types, containing "National" Pipe and considerable engineering data of value to architects, engineers, etc.
- Modern Welded Pipe.** Book of 88 pp. (8 1/2 x 11 in.), profusely illustrated with halftone and line engravings of the important operations in the manufacture of pipe.
- Reading Iron Company,** Reading, Pa.
Reading Genuine Wrought Iron Pipe in the Making and in Service. Bulletin No. 1. 8 1/2 x 11 in., 32 pp. Illustrated. History of the Reading Iron Company. Origin of wrought iron—description of each process of manufacture of both butt-weld and lap-weld pipe—Reading Pipe in various fields.
- Book of Standards.** Booklet. 5 x 7 in., 48 pp. Illustrated. Complete tables showing dimensions, tests and list price on each of the 552 different kinds of Reading Tubular goods. Two simple tests for distinguishing genuine wrought iron pipe.
- The Painted Molecule.** Booklet. 4 x 9 in., 8 pp. Illustrated. A brief, non-technical description of the reasons for the longer life of Reading Iron Pipe, with instances of actual service.
- The Ultimate Cost.** Booklet. 5 1/4 x 7 1/4 in., 24 pp. Illustrated in two colors. A comparison in actual figures of the initial cost and the ultimate cost of plumbing and heating systems in several kinds of homes.
- Grinnell Company,** 285 West Exchange Street, Providence, R. I.
Grinnell Bulletin Booklet. 10 1/2 x 7 3/4 in. Illustrated. Issued monthly. Describes and illustrates the different Grinnell products.

PLUMBING EQUIPMENT

- American Brass Company,** Waterbury, Conn.
Benedict Nickel. Illustrated pamphlet descriptive of Benedict Nickel White Metal for high grade plumbing fixtures.
- Brunswick-Balke-Collender Co.**, 623 S. Wabash Ave., Chicago, Ill.
Whale-bone-ite Seat. Booklet. 3 1/2 x 6 1/4 in., 4 pp. Illustrated.
- Clow & Sons, James B.**, 534 S. Franklin Street, Chicago, Ill.
Catalog "M." 9 1/2 x 12 in., 184 pp. Illustrated. Shows complete line of plumbing fixtures for Schools, Railroads and Industrial Plants.
- Crane Company,** 836 S. Michigan Avenue, Chicago, Ill.
Crane Products in World Wide Use. Catalog. 5 x 9 1/2 in., 24 pp. Illustrated.
- Plumbing Suggestions for Home Builders.** Catalog. 3 x 6 in., 80 pp. Illustrated.
- Plumbing Suggestions for Industrial Plants.** Catalog. 4 x 6 1/2 in., 43 pp. Illustrated.
- Douglas Co., The John,** Cincinnati, Ohio.
Catalog "C." 10 1/2 x 8 in., 200 pp. Illustrated. Illustrates and describes the Douglas complete line of China Sanitary plumbing fixture.
- Booklet. Douglas Suggests for your Home. 6 x 3 1/2 in., 39 pp. Illustrated.
- Eljer Company,** Fort City, Pa.
Complete Catalog. 3 1/4 x 6 1/4 in., 104 pp. Illustrated. Describes fully the complete Eljer line of standardized vitreous china plumbing fixtures, with diagrams, weights and measurements. Standardized Sixteen Circular. 3 1/4 x 6 1/4 in., 18 pp. Illustrated.
- Kohler Co., Kohler, Wis.**
Catalog F. 7 1/2 x 10 1/2 in., 216 pp. Illustrates and describes the complete line of Kohler trade-marked plumbing ware.
- Roughing-In Measurement Binder.** 5 x 8 in., containing loose leaf sheets on all staple fixtures.
- Maddock's Sons Company,** Thomas, Trenton, N. J.
Catalog K. 10 1/2 x 7 1/2 in., 242 pp. Illustrated. Complete data on vitreous china plumbing fixtures with brief history of Sanitary Pottery.
- Mueller Co.,** Decatur, Ill.
Catalog G. 8 x 11 in., 316 pages. Profusely illustrated. Contains full data on plumbing, water and gas brass goods, including valves, faucets, traps, regulators, built-in bath equipment, and automatic systems of hot water control. Complete details are presented with a number of data sheets showing roughing-in measurements for built-in bath equipment.
- Speakman Company,** Wilmington, Del.
Speakman Showers and Fixtures. Catalog. 4 1/4 x 7 1/2 in., 250 pp. Illustrated. Catalog of Modern Showers and Brass Plumbing Fixtures, with drawings showing layouts, measurements, etc.
- Toned Up in Ten Minutes.** Booklet. 7 1/4 x 10 1/2 in., 16 pp. Illustrated. Modern Showers and Washups for Industrial Plants, showing the sanitary method of washing in running water.

PUMPS

- Chicago Pump Company,** 2300 Wolfram Street, Chicago, Ill.
The Correct Pump to Use. Portfolio containing handy data. Individual bulletins, 8 1/2 x 11 in., on bilge, sewage, condensation, circulating, house, boiler feed and fire pumps.
- Goulds Mfg. Co., The,** Seneca Falls, N. Y.
Set of Twenty Bulletins. 7 1/2 x 10 1/2 in., 12 to 32 pp. each. Illustrated. Covers complete line of power and centrifugal pumps for all services.

PUMPS—Continued

- Kewanee Private Utilities Co.**, 442 Franklin St., Kewanee, Ill.
Bulletin E. 7 1/4 x 10 1/4 in., 32 pp. Illustrated. Catalog. Complete descriptions, with all necessary data, on Standard Service Pumps, Indian Brand Pneumatic Tanks, and Complete Water Systems, as installed by Kewanee Private Utilities Co.

RAMPS

- The Hockenbury System Incorporated,** Harrisburg, Pa., for years specializing in the financing of modern community hotels, of which they have financed a hundred such throughout the United States, has expanded its service to include the financing of MOTORAMP garage buildings. They now have available for distribution an 8 1/2 x 11 booklet entitled: "The Hitching Post Problem Is Here Again," in which they explain their solution of the street motor parking problem, which will be sent free to inquiring architects.

Ramp Buildings Corporation, 115 Broad St., New York, N. Y.

- The d'Humy Motoramp System of Building Design. Booklet. 8 1/2 x 11 in., 20 pp. Illustrated. Describes the d'Humy system of ramp construction for garages, service buildings, factories, warehouse, etc., where it is desirable to drive motor vehicles or industrial tractors under their own power from floor to floor.
- Storage Efficiency of Multi-Floor Garages.** Leaflet. 8 1/2 x 11 in., 4 pp. Illustrated. A brief discussion of comparative storage efficiencies of elevator garages, ordinary ramp garages, and d'Humy Motoramp garages.
- Visibility.** Pamphlet. 8 1/2 x 11 in., 2 pp. Illustrated. Discussion of visibility feature of d'Humy Motoramp System with reference to illustration of one particular installation.
- Series of Informal Bulletins on Garage Design. Sent upon request.

REINFORCED CONCRETE—See also Construction, Concrete

- The General Fireproofing Company,** Youngstown, Ohio.
Self-Sentering Handbook. 8 1/2 x 11 in., 36 pp. Illustrated. Methods and specifications on reinforced concrete floors, roofs and floors with a combined form and reinforced material.
- National Steel Fabric Co.,** Union Trust Building, Pittsburgh, Pa.
National Steel Fabric. Booklet. 32 pp. 8 1/2 x 11 in. A valuable work on the subject of concrete and its reinforcing.
- Truscon Steel Company,** 250 W. Lafayette Blvd., Detroit, Mich.
Shearing Stresses in Reinforced Concrete Beams. Booklet. 8 1/2 x 11 in., 12 pp.
- North Western Expanded Metal Company,** Chicago, Ill.
Designing Data. Book. 6 x 9 in., 96 pp. Illustrated. Covers the use of Econo Expanded Metal for various types of reinforced concrete construction.

ROOFS—(INSULATED)

- Holorib, Inc.,** 2735 Prospect Ave., Cleveland, Ohio.
Holorib Insulated Roofs. Booklet, 16 pp., 8 1/2 x 11 ins. Gives complete data regarding a valuable line of insulated roofing materials.

ROOFING

- American Brass Company,** Waterbury, Conn.
Service Sheets 43-1 and 43-2, standard specifications and methods of laying copper roofings, flashings, hips, valleys, decks, gutters and leaders.
- American Sheet & Tin Plate Co.,** Frick Bldg., Pittsburgh, Pa.
Better Buildings. Catalog. 8 1/2 x 11 in., 32 pp. Describes Corrugated and Formed Sheet Steel Roofing and Siding Products, black, painted and galvanized, with directions for application of various patterns of Sheet Steel Roofing in various types of construction.
- Copper—Its Effect Upon Steel for Roofing Tin.** Catalog. 8 1/2 x 11 in., 28 pp. Illustrated. Describes the merits of high-grade roofing tin plates, and the advantages of the copper-steel alloy.
- The Testimony of a Decade.** Booklet. 8 1/2 x 11 in., 16 pp., with Graphic Chart and illustrations showing losses to various Iron and Steel Sheets for roofing, from atmosphere corrosion.
- Philip Carey Co.,** Lockland, Cincinnati, Ohio.
Architects Specifications for Carey Built-up Roofing. Booklet. 8 x 10 1/4 in., 24 pp. Illustrated. Complete data to aid in specifying the different types of built-up roofing to suit the kind of roof construction to be covered.
- Carey Built-up Roofing for Modern School Buildings.** Booklet. 8 x 10 1/4 in., 32 pp. Illustrated. A study of school buildings of a number of different kinds and the roofing materials adapted for each.
- Federal Cement Tile Co.,** 608 So. Dearborn St., Chicago, Ill.
The Indestructible Roof. Booklet. 10 x 13 in., 32 pp. Illustrated. Illustrates and describes the installation of permanent concrete interlocking tile, tile with glass insets, flat tile and channel tile, on all types of industrial plants and other buildings with flat and pitched surfaces.
- Standards.** Booklet. 8 1/2 x 11 in., 40 pp. Illustrated with full-page drawings. Gives full details of all forms of roof construction of steel structure, ridge and gutter construction, purlin arrangement, spacing, etc., for standard roofs.
- Johns-Manville, Inc.,** Madison Ave. & 41st St., New York, N. Y.
Johns-Manville Building Materials. Book. 8 1/2 x 11 in., 100 pp. Illustrated. A comprehensive catalog of various types of roofing for all forms of construction. Details of wall, floor and ceiling insulation; asbestos wood for fireproof construction; waterproofing, etc.
- Johns-Manville Asbestos Shingles.** Booklet. 8 1/2 x 11 in., 24 pp. Illustrated. This booklet is profusely illustrated in colors, showing some very artistic blends of asbestos shingles with various types of architecture. Contains many valuable suggestions for the architect.
- Ludowici-Celadon Company,** 104 So. Michigan Ave., Chicago, Ill.
"Ancient" Tapered Mission Tiles. Leaflet. 8 1/2 x 11 in., 4 pp. Illustrated. For architects who desire something out of the ordinary, this leaflet has been prepared. Describes briefly the "Ancient" Tapered Mission Tiles; hand-made, with full corners and designed to be applied with irregular exposures.
- Milwaukee Corrugating Co.,** Milwaukee, Wis.
The Milcor Architectural Sheet Metal Guide. Booklet. 8 1/2 x 11 in., 64 pp. Illustrated. Gives valuable technical sheet metal data.



MAKING THE DEADLINE

On the World's Greatest Newspaper

The City Editor reached across the desk for his P-A-X phone and quickly dialed 506: Down in the composing room, the foreman's telephone rang out insistently.

"Conway! Hold everything-----Special coming through-----Explosion in the _____ Building! Get set for it-----Ready in two minutes!"

A NEWSPAPER must be able to function properly and efficiently, not only under normal conditions, but to meet every emergency that may arise—and emergencies are frequent.

Often the biggest story will occur within a few minutes of the "deadline"—the zero hour in the pressroom. No one can foretell the day and hour of a big explosion or fire, the death of a public man, a railroad accident, the collapse of a building. Whenever, and however, the big story "breaks", a newspaper must be ready,—able to change its plans at an instant's notice and get the story into type.

The Chicago Tribune meets these strenuous demands through the use of P-A-X. Every hour of the day and night their 550 automatic telephones convey calls and carry information from one department to another. Reporters are summoned and ordered to the scene of a

story without the loss of a moment—while editors, special writers, research workers, artists, photographers, engravers, compositors and pressroom employees step into action simultaneously,—all this to the end that the latest bit of news may appear on the breakfast tables of more than a half million readers.

Getting out a single day's issue of the Tribune requires an average of 22,506 telephone calls. All inside calls among the 550 house phones are entirely automatic. Connections between departments are made with remarkable speed, and cannot be interrupted until the call is finished. The mechanical switchboard, swiftly, accurately, and untiringly does the work of ten operators.

Nearly 2,000 organizations, in every field of industry, find P-A-X a vital necessity which actually pays for itself in a short time.



The P-A-X is, fundamentally, a private automatic telephone exchange built of the same Strowger type of automatic telephone equipment being so widely adopted for city service. The P-A-X may be furnished to include and co-ordinate such services as code call, conference, executive's priority, emergency alarm, etc., to meet individual needs.

Automatic Electric Company

Home Office and Factory, CHICAGO, ILL., Branch Offices: New York, 21 East Fortieth St.; Cleveland, Cuyahoga Bldg. Representatives in all principal cities. In Canada—Northern Electric Co., Ltd., 121 Shearer St., Montreal, P. Q. Abroad—International Automatic Telephone Co., Norfolk House, Norfolk St., Strand, London, W. C. 2, England. In Australia—Automatic Telephones, Ltd., Mendes Chambers, Castlereagh St., Sydney.

P-A-X
TRADE MARK
PRIVATE AUTOMATIC EXCHANGE

Automatic Electric Company is the originator of P-A-X and is the only organization in the United States manufacturing interior telephone equipment under this trade-mark. Its use by any other company is absolutely unauthorized.



SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 96

ROOFING—Continued

- National Slate Association**, 791 Drexel Building, Philadelphia, Pa.
Slate Roofs. Book, 84 pages. $8\frac{1}{2}$ x 11 in. Illustrated. Just off press; most complete specification information, practical ideas and other authoritative industry data, tables on grading, color designation, etc., on American roofing slates. Sent free to architects applying on their office stationery. To others, \$1.50.
- New Jersey Zinc Company**, 160 Front St., New York, N. Y.
Standing Seam Horse Head Zinc Roofing. Booklet outlining the adaptability of this roofing for many types of buildings. Illustrated with sketches showing how roofing is applied. Also describes lasting qualities, appearance, etc.
Once in a Lifetime. Booklet describing conductors, gutters and standing seam roofing made from Horse Head Zinc. Contains information on their economy and durability. Illustrated.
- Ruberoid Co., The** (formerly the Standard Paint Co.), 95 Madison Avenue, New York, N. Y.
Instructions for Laying Built-up Roofs. Booklet. $8\frac{1}{2}$ x 11 in. Illustrated.
- Ruberoid Strip Shingle**. Booklet. $3\frac{1}{2}$ x $6\frac{1}{4}$ in. 16 pp. Illustrated in color.
- U. S. Gypsum Co.**, Chicago.
Pyrobar Roof Construction. Booklet. 8 x 11 in. 48 pp. Illustrated. Gives valuable data on the use of tile in roof construction.
Sheetrock Pyrofill Roof Construction. Folder. $8\frac{1}{2}$ x 11 in. Illustrated. Covers use of roof surfacing which is poured in place.

RUGS, IMPORTED

- Kent-Costikyan Trading Company, Inc.**, 484 Fifth Ave., New York, N. Y.
Rugs, Catalogue. $9\frac{1}{2}$ x $6\frac{1}{4}$ in. 56 pp. Illustrated. Illustrates and describes an unusual collection of Oriental and Occidental rugs with stock list.

SASH CHAIN

- American Chain Company, Inc.**, Bridgeport, Conn.
American Sash Chain. Booklet. 6 x 9 in. 16 pp. Illustrated. Describes and illustrates American Sash Chain and Sash Fixtures.
- Smith & Egge Mfg. Co., The**, Bridgeport, Conn.
Chain Catalog. 6 x $8\frac{1}{2}$ in. 24 pp. Illustrated. Covers complete line of chains.

SASH CORD

- Samson Cordage Works**, Boston, Mass.
Catalog. $3\frac{1}{2}$ x $6\frac{1}{4}$ in. 24 pp. Illustrated. Covers complete line of rope and cord.

SCREENS

- Athey Company**, 6015 West 65th St., Chicago, Ill.
The Athey Perennial-Window Shade. An accordion pleated window shade, made from translucent Herringbone woven Coutil cloth, which raises from the bottom and lowers from the top. It eliminates awnings, affords ventilation, can be dry-cleaned and will wear indefinitely.
- The Higgin Manufacturing Co.**, Newport, Ky.
Your Home Screened the Higgin Way. Booklet. $8\frac{1}{2}$ x $11\frac{1}{4}$ in. 13 pp. Illustrated in colors. Complete description of Higgin Screens, designed to meet every need.
- New Jersey Wire Cloth Co.**, Trenton, N. J.
A matter of Health and Comfort. Booklet. 5 x $7\frac{3}{4}$ in. 16 pp. Illustrated. Discusses quality in wire insect screen cloth.

SEWAGE DISPOSAL

- Kewanee Private Utilities**, 442 Franklin St., Kewanee, Ill.
Specification Sheets. $7\frac{3}{4}$ x $10\frac{1}{4}$ in. 40 pp. Illustrated. Detailed drawings and specifications covering water supply and sewage disposal systems.

SHEATHING

- Bishopric Manufacturing Co.**, 103 Este Ave., Cincinnati, Ohio.
For All Time and Clime. Booklet. 6 x 9 in. 48 pp. Illustrated. Describing the use of Bishopric stucco base and Bishopric plaster base.

SHELVING-STEEL

- David Lupton's Sons Company**, Philadelphia.
Lupton Steel Shelving. Catalog D. Illustrated brochure, 40 pp., $8\frac{1}{2}$ x 11 in. Deals with steel cabinets, shelving, racks, doors, partitions, etc.

STAINS—See Paints, Varnishes, Wood Finishes

STONE, BUILDING

- Indiana Limestone Quarrymen's Association**, Box 766, Bedford, Ind.
Volume 3, Series A-3. Standard Specifications for Cut Indiana Limestone work; $8\frac{1}{2}$ x 11 in. 56 pp. Containing specifications and supplementary data relating to the best methods of specifying and using this stone for all building purposes.
- Vol. 1, Series B. Indiana Limestone Library. 6 x 9 in. 36 pp. Illustrated. Giving general information regarding Indiana Limestone, its physical characteristics, etc.
- Vol. 4, Series B. Booklet. New Edition. $8\frac{1}{2}$ x 11 in. 64 pp. Illustrated. Indiana Limestone as used in Banks.
- Volume 5, Series B. Indiana Limestone Library. Portfolio. $11\frac{1}{4}$ x $8\frac{1}{4}$ in. Illustrated. Describes and illustrates the use of stone for small houses with floor plans of each.

STORE FRONTS

- Brasco Manufacturing Co.**, 5025-35 South Wabash Avenue, Chicago, Ill.
Portfolio. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrated. Selected examples of Brasco Copper Store Fronts suitable for different businesses and varying conditions of locations.
- Catalogue 28. $8\frac{1}{2}$ x $10\frac{1}{4}$ in. 20 pp. Illustrated with plates. Details of Brasco Copper Store front construction. Also show-cases, ventilator sashes.
- Detail Sheets. Set of five sheets giving details and suggestions for store front designing enclosed in envelope convenient for filing.

STORE FRONTS—Continued

- Kawneer Co., The**, Niles, Mich.
A Collection of Successful Designs. Catalog. $9\frac{1}{4}$ x $6\frac{1}{4}$ in. 64 pp. Illustrated. Showing by use of drawings and photographs many types of Kawneer Solid Copper Store Fronts.
- Catalog L, 1925 Edition. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrated. Details of copper store front construction.
- Metal Store Fronts. Sheets, 17 x 22 in. Draftsmen's details of copper store fronts for use in tracing.
- Zouri Drawn Metals Company**, Chicago Heights, Ill.
Zouri Safety Key-Set Store Front Construction. Catalogue. $8\frac{1}{2}$ x $10\frac{1}{2}$ in. 60 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.
- International Store Front Construction. Catalogue. $8\frac{1}{2}$ x 10 in. 70 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.

STUCCO

- Bishopric Manufacturing Co.**, 103 Este Ave., Cincinnati, Ohio.
For All Time and Clime. Booklet. 6 x 9 in. 48 pp. Illustrated. Describing the use of Bishopric stucco base and Bishopric plaster base.

STUCCO BASES

- Bishopric Manufacturing Co.**, 103 Este Ave., Cincinnati, Ohio.
Specifications and Working Details. Booklet. $7\frac{3}{4}$ x $10\frac{1}{4}$ in. Illustrated. Contains plainly written instructions for the use of stucco, stucco base, plaster base and insulation base.
- National Steel Fabric Co.**, Union Trust Building, Pittsburgh, Pa.
Building a Permanent Home. Brochure 4 x 9 in. 20 pp. Discusses the use of steel materials in domestic buildings in a way likely to interest architects and builders.
- Sales Manual. Loose leaf, $8\frac{1}{2}$ x 11 in. Complete data and specifications regarding the use of this company's products.

SWIMMING POOL EQUIPMENT

- Rohmer Standard Swimming Pool Equipment**, 516 Fifth Avenue, New York. Phone Murray Hill 1138. See Sweet's Catalog, pages 468-471, for details and specifications.

STUCCO, MAGNESITE

- Muller & Co., Franklyn R.**, Waukegan, Ill.
Everlastic Magnesite Stucco. Booklet. $8\frac{1}{2}$ x 11 in.

TECHNICAL PAINTING

- Toch Brothers**, 110 East 42nd Street, New York, City.
Specifications for Dampproofing, Waterproofing, Enameling and Technical Painting. Complete and authoritative directions for use of an important line of materials.

TERRA COTTA

- National Terra Cotta Society**, 19 West 44th St., New York, N. Y.
Standard Specifications for the Manufacture, Furnishing and Setting of Terra Cotta. Brochure $8\frac{1}{2}$ x 11 in. 12 pp. Furnishing and Setting of Terra Cotta, consisting of complete detail Specification, Glossary of Terms Relating to Terra Cotta and Short Form Specification for incorporating in Architect's Specifications.
- Color in Architecture. Revised Edition. Permanently bound volume $9\frac{1}{2}$ x $12\frac{1}{4}$ in., containing a treatise upon the basic principles of color in architectural design; illustrating early European and modern American examples. Excellent illustrations in color.
- Present Day Schools. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrating 42 examples of school architecture with article upon school building design by James O. Betelle, A. I. A.
- Better Banks. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bossom, Architect.

THERMOSTATS—See Heating Equipment

TILE, FLOOR AND WALL

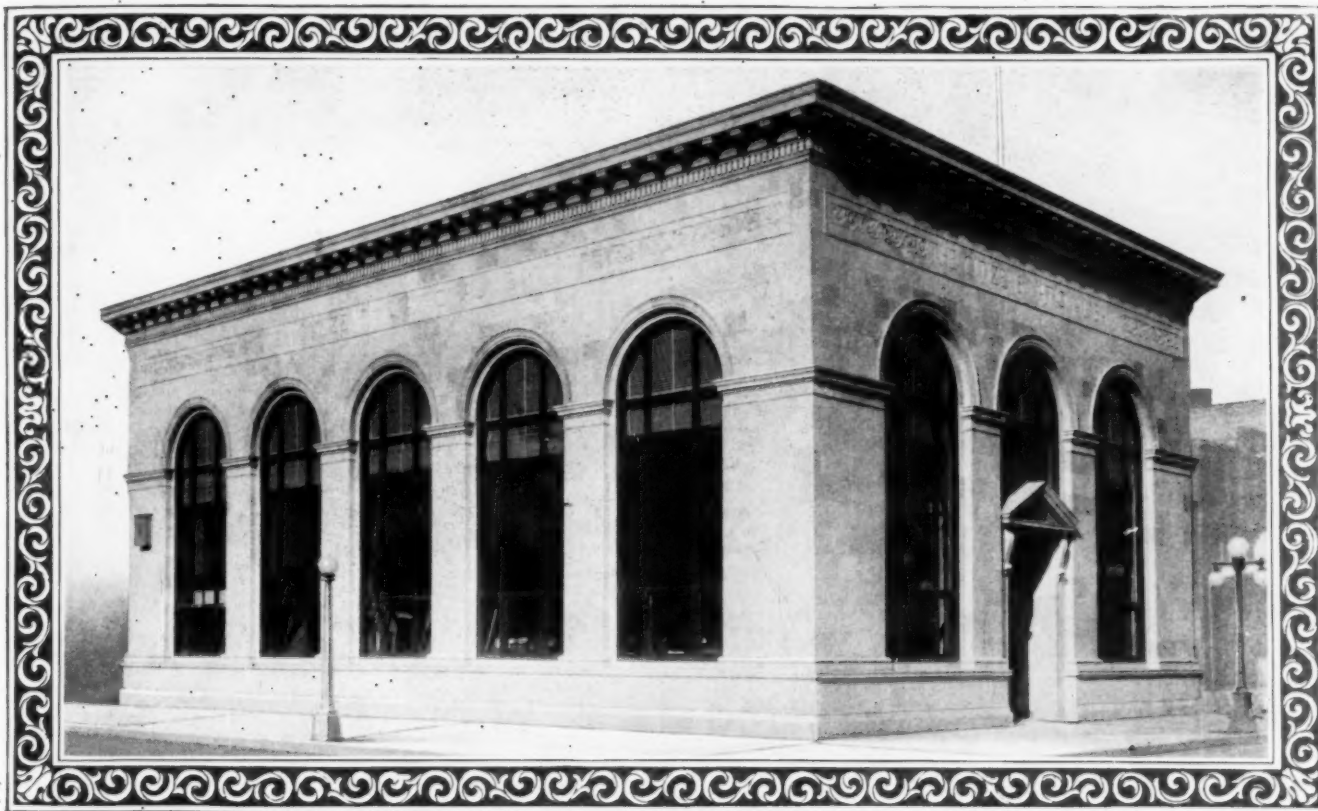
- Associated Tile Manufacturers, The**, Beaver Falls, Pa.
Basic Information Booklet. $7\frac{1}{2}$ x $10\frac{1}{4}$ in. 24 pp. Illustrated. Ask for Booklet K-200.
- A publication issued for architects, engineers and educators to acquaint them with methods of grading, derivation of sizes and shapes, variety of colors, kind of finishes, nomenclature and ingredients and processes insofar as they lead to a better understanding of the product and its uses.
- Basic Specifications and Related Documents, Booklet. $7\frac{1}{2}$ x $10\frac{1}{4}$ in. 38 pp. Ask for Booklet K-300.
- The Basic Specification proper gives in detail the procedure to be followed with respect to any kind of tile installation in connection with practically every type of construction. The Related Documents or work sheets are designed to call attention to optional application methods and materials.
- Swimming Pools. Booklet. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrated. Issued for the use of architects and engineers as a handbook on swimming pools and their construction.
- Bringing the Crowds to Your Market. Booklet. $8\frac{1}{2}$ x 11 in. 16 pp. Illustrated in color. Shows use of tile for the modern sanitary market.

TILE, HOLLOW

- National Fire Proofing Co.**, 250 Federal St., Pittsburgh, Pa.
Standard Wall Construction Bulletin 174. $8\frac{1}{2}$ x 11 in. 32 pp. Illustrated. A treatise on the subject of hollow tile wall construction.
- Natco on the Farm. $8\frac{1}{2}$ x 11 in. 38 pp. Illustrated. A treatise on the subject of fire safe and permanent farm building construction.
- Natco Homes and Garages. Booklet. 7 x 10 in. 32 pp. Illustrated. Showing the use of Natco Hollow Tile for private residences.

VACUUM CLEANING APPARATUS

- The Spencer Turbine Company**, Hartford, Conn.
Vacuum Cleaning Apparatus for all purposes. Booklet. 32 pp. Illustrated. Complete information on product, showing prominent buildings equipped with this system.



The Roof *Must* Be Good!

CITIZENS BANK

Lodi, Calif.

4-ply Carey Built-Up
Roof used

Roof furnished by Allyn L.
Burr Co., Stockton, Calif.

Designed and built by
Davis-Heller-Pearce Co.,
Architects, Engineers,
Constructors

THERE can be no compromise in the quality of the roof you put on a building of this character. No excuses will go.

And you can make sure — as so many other architects are doing — by covering such a building with a Carey Built-Up Roof.

No matter what the type of building, there is a Carey roof that will provide the best possible protection. Ask for the new Carey Specification Book. It gives all the facts in workable detail.

THE PHILIP CAREY COMPANY
504-524 Wayne Ave., Lockland, Cincinnati, Ohio

Carey
BUILT-UP ROOFS

A Roof for Every Building

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 98

VALVES

Crane Co., 836 S. Michigan Ave., Chicago, Ill.
No. 51. General Catalogue. Illustrated. Describes the complete line of the Crane Co.

Illinois Engineering Co., Racine Ave., at 21st St., Chicago, Ill.
Catalogue. 8½ x 11 in. 88 pp. Illustrated.

Jenkins Bros., 80 White Street, New York.

The Valve Behind a Good Heating System. Booklet 4½ x 7¼ in. 16 pp. Color plates. Description of Jenkins Radiator Valves for steam and hot water, and brass valves used as boiler connections.

Jenkins Valves for Plumbing Service. Booklet. 4½ x 7¼ in. 16 pp. Illustrated. Description of Jenkins Brass Globe, Angle Check and Gate Valves commonly used in home plumbing, and Iron Body Valves used for larger plumbing installations.

Mueller Co., Decatur, Ill.

Catalog G, 8 x 11 in. 316 pages. Profusely illustrated. Contains full data on plumbing, water and gas brass goods, including valves, faucets, traps, regulators, built-in bath equipment, and automatic systems of hot water control. Complete details are presented with a number of data sheets showing roughing-in measurements for built-in bath equipment.

VARNISH—See Paints, Stains, Varnishes

VENETIAN BLINDS

Burlington Venetian Blind Co., Burlington, Vt.

Venetian Blinds. Booklet, 7 in. x 10 in., 24 pages. Illustrated. Describes the "Burlington" Venetian blinds, method of operation, advantages of installation to obtain perfect control of light in the room.

VENTILATION

Globe Ventilator Company, 205 River Street, Troy, N. Y.

Globe Ventilators Catalog. 6 x 9 in. 32 pp. Illustrated profusely. Catalog gives complete data on "Globe" ventilators as to sizes, dimensions, gauges of material and table of capacities. It illustrates many different types of buildings on which "Globe" ventilators are in successful service, showing their adaptability to meet varying requirements.

Van Zile Ventilating Corporation, 280 Madison Avenue, New York, N. Y.

The Ventadoor Booklet. 6½ x 3½ in. 16 pp. Illustrated. Describes and illustrates the use of the Ventadoor for Hotels, Clubs, Offices, etc.

WALLPAPER

Wallpaper Mfrs. Assn., 461 Eighth Avenue, New York.

Wallpaper Magazine. Illustrated. 8 x 11 in. 32 pp. Published monthly to acquaint architects and interior decorators with many interesting and decorative uses for wallpaper.

WATERPROOFING

Carey Company, The Philip, Lockland, Cincinnati, Ohio.

Waterproofing Specification Book. 8½ x 11 in. 52 pp.

The General Fireproofing Company, Youngstown, Ohio.

Waterproofing Handbook. Booklet. 8½ x 11 in. 72 pp. Illustrated. Thoroughly covers subject of waterproofing concrete, wood and steel preservatives, dustproofing and hardening concrete floors, and accelerating the setting of concrete. Free distribution.

Master Builders' Company, Cleveland, Ohio.

Mastermix: Waterproof Cement Paint in Colors. Folder 10½ x 12½ inches.

Ruberoid Co., The, 95 Madison Ave., New York.

Impervite. Circular. 8½ x 11 in. 4 pp. Illustrated. An integral water-proofing compound for concrete, stucco, cement, mortar, etc.

Sandusky Cement Co., Dept. F., Cleveland, Ohio.

Medusa Waterproofing. Booklet. 6¼ x 9 in. 38 pp. Illustrated.

Sonneborn Sons, Inc., 116 Fifth Ave., New York, N. Y.

Pamphlet. 3¼ x 8¼ in. 8 pp. Explanation of waterproofing principles. Specifications for waterproofing walls, floors, swimming pools and treatment of concrete, stucco and mortar.

WATERPROOFING

Toch Brothers, 110 East 42nd Street, New York City.

Specifications for Dampproofing, Waterproofing, Enameling and Technical Painting. Complete and authoritative directions for use of an important line of materials.

WATER PURIFIERS

Wallace & Tiernan Company, Newark, N. J.

Protecting N. Y. Water Supply. Booklet. 10 x 7 in. 4 pp. Illustrated. Describes the chlorinating equipment used for sterilizing N. Y. City water supply; also equipment suitable for sterilizing water supplies of municipalities, industrial plants, private residences, etc.

The W. & T. Chlorometer, Technical Publication, No. 55. Booklet. 8½ x 11 in. 8 pp. Illustrated. A useful brochure dealing with the value of pure water and the importance of the chlorination process in sterilization.

WATER SOFTENERS

Permutit Company, The, 440 Fourth Ave., New York, N. Y.

Permutit-Water softened to No (Zero) Hardness. Booklet. 8½ x 11 in. 32 pp. Describing the original Zeolite process of softening water to zero hardness. An essential for homes, hotels, apartments houses, swimming pools, laundries, textile mills, paper mills, ice plants, etc., in hard water districts.

WEATHER STRIPS

Chamberlin Metal Weather Strip Company, 1644 Lafayette Boulevard, Detroit, Mich.

Chamberlin Metal Weather Strip Details, 1925 edition. Catalog 8½ x 11 in. 48 pp. Complete specifications and full-sized details. With or without 9 x 11¼ in. folder conforming to A. I. A. filing system. May also be used in loose leaf form. Excluding Cold and Dust with Chamberlin for 32 years. Booklet 5¼ x 7¼ in. 16 pp. Illustrated. Completely and interestingly illustrates application of Chamberlin equipment.

The Higgin Manufacturing Co., Newport, Ky.

Higgin All-Metal Weather Strips. Booklet. 6 x 9 in. 21 pp. Illustrated in colors. Describes various types of Higgin Weather Strips for sealing windows and doors against cold and dust.

WINDOWS

David Lupton's Sons Company, Philadelphia.

Lupton Pivoted Sash, Catalog 12-A. Booklet 48 pp., 8½ x 11 in. Illustrates and describes windows suitable for manufacturing buildings.

WINDOWS; CASEMENT

Richards-Wilcox Mfg. Co., Aurora, Ill.

Casement Window Hardware. Booklet. 24 pp. 8½ x 11 in. Illustrated. Shows typical installations, detail drawings, construction details, blue-prints if desired. Describes AIR-way Multifold Window Hardware.

Crittall Casement Window Co., 10951 Hearn Ave., Detroit, Mich. Catalog No. 22. 9 x 12 in. 76 pp. Illustrated. Photographs of actual work accompanied by scale details for casements and composite steel windows for banks, office buildings, hospitals and residences.

Detroit Steel Products Co., Detroit, Mich.

Fenestra Casement Windows. Catalog. 8½ x 11 in. 20 pp. Illustrated. Gives construction and installation details of steel casements, standard and stock types and sizes.

Hope & Sons, Henry, 103 Park Ave., New York, N. Y.

Catalog. 12¼ x 18½ in. 30 pp. Illustrated. Full size details of outward and inward opening casements.

David Lupton's Sons Company, Philadelphia.

Lupton Casements of Copper-Steel. Catalog C-122. Booklet 16 pp., 8½ x 11 in. Illustrated brochure on casements, particularly for residences.

WINDOWS, STEEL AND BRONZE

Detroit Steel Products Company, Detroit, Mich.

Fenestra Basement Windows. Booklet. 3½ x 6¼ in. 16 pp. Illustrated. Describes steel basement windows, their advantages, details and specifications for installation.

Fenestra Reversible Ventilator Windows. Booklet. 8½ x 11 in. 20 pp. Illustrated. Describes the details of this new model window, as well as the variety it offers for attractive architectural design.

Fenestra Industrial Window Walls. Catalog. 8½ x 11 in. 111 pp. Illustrated. Details and specifications, with photographic illustrations, are thoroughly covered in the Fenestra General Catalog.

The Kawneer Company, Niles, Mich.

Kawneer Simplex Windows. Catalog. 8½ x 10½ in. 16 pp. Illustrated. Complete information, with measured details, of Kawneer Simplex, Weightless Reversible Window Fixtures, made of solid bronze. Shows installations in residences and buildings of all sorts.

Detail Sheets and Installation Instructions. Valuable for architects and builders.

Metal Windows. Catalog. 8½ x 11 in. 18 pp. Illustrated. Features double-lining and casement windows of metal.

David Lupton's Sons Company, Philadelphia.

A Rain-shed and Ventilator of Glass and Steel. Pamphlet, 4 pp. 8½ x 11 in. Deals with Pond Continuous Sash, Sawtooth Roofs, etc.

Truscon Steel Company, 250 W. Lafayette Blvd., Detroit, Mich.

Truscon Steel Windows. Catalog. 8½ x 11 in. 80 pp. Illustrated. Contains complete data on all types of Truscon Steel Windows.

WOOD—See also Millwork

American Walnut Mfrs. Association, 618 So. Michigan Blvd., Chicago, Ill.

American Walnut. Booklet. 7 x 9 in. 45 pp. Illustrated. A very useful and interesting little book on the use of Walnut in Fine Furniture with illustrations of pieces by the most notable furniture makers from the time of the Renaissance down to the present.

Real American Walnut Furniture. Folder: 8½ x 11 in. 4 pp. Illustrated. Tells how to identify the genuine and avoid the substitute in buying "Walnut" furniture.

California White and Sugar Pine Mfrs. Assn., San Francisco, Cal. Information Sheet No. 1, California White Pine; Information Sheet No. 2, California Sugar Pine. Illustrated booklets 8 x 10½ in. First of a series of Information Sheets on these woods and their uses for construction and finish.

Curtis Companies Service Bureau, Clinton, Iowa.

Better Built Homes. Vols. XV, XVIII, incl. Booklet. 9 x 12 in. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects, for the Curtis Companies.

Long-Bell Lumber Co., Kansas City, Mo.

The Perfect Floor. Booklet 5¼ x 7¼ in. 16 pp. Illustrated. Valuable for the data given on the use of wood for floors. Saving Home Construction Costs. Booklet 4½ x 7½ in. 24 pp. Discusses economy and value in domestic building.

Experiences in Home Building. Booklet 6 x 9 in. 16 pp. Records the testimony of a number of builders and contractors as to the value of certain materials.

The Post Everlasting. Booklet 8 x 11 in. 32 pp. Illustrated. Describes the production of posts and their use in various ways. Booklet. 6 x 8 in. Architectural Woodwork of Mahogany. 32 pp., fully illustrated with photographs of mahogany panelings and containing much information of interest to architects.

Matthews Bros. Mfg. Company, Milwaukee, Wis.

Architectural Woodwork. Catalog. 9 x 12 in. 34 pp. Illustrated. This is the only catalog issued, and contains views showing both exteriors and interiors of banks, private residences, and office buildings in which this Company's woodwork has been installed.

Pacific Lumber Company, 332 So. Michigan Ave., Chicago, Ill.

California Redwood. Booklet. 9 x 12 in. 36 pp. Illustrated. Describes in a general way the production, manufacture and various uses of California Redwood.

Redwood Construction Digest. Booklet. 8½ x 11 in. 16 pp. Illustrated. Redwood and Its Uses in the Construction Field. Contains specifications and other information of interest to architects.

WOOD FINISHES—See Paints, Varnishes, Stains

California PINE

California
White Pine
(trade name)

California
Sugar Pine

Sidings that look well and "stay put"



THE HOUSE with California Pine siding stands as a permanent display of the architect's good judgment.

Siding of California Pine, not only looks well to start with, but *holds* its shape, lays flat without warping or end-shrinking, twisting or splitting. That is because of the remarkable cellular construction of California Pine, and its susceptibility to perfect seasoning.

Builders and carpenters, likewise welcome the specification of California Pine siding. The builder, because this siding is obtainable in all the various forms, of standard widths and lengths.—the carpenter, because California Pine siding is so easy to cut, fit and nail securely to the sheathing. All of which makes for good workmanship without waste of time.

Then, as to painting—this light-colored, soft pine is easy to paint. The brush



Carpenters like California Pine siding because it's easy to cut and fit, and makes for good workmanship.



Cork-like texture holds nails tightly and prevents splitting, even with nails driven close to edge or end.



Paint flows evenly and spreads smoothly on California Pine. It *holds* paint well and the *co.* stays smooth.

moves along readily while the paint flows evenly and spreads smoothly. California Pine holds paint—the coat *stays* smooth, because of freedom from pitch and grain-raising tendencies.

If you have not received a set of our Information Sheets on California Pine, let us send them to you. You are also invited to correspond with our Wood Technologist, formerly with the U.S. Government Forest Products Laboratory, at Madison, Wisconsin, and now connected with this association.

California White and Sugar Pine Manufacturers Association

654 Call Building • San Francisco

Also producers of CALIFORNIA WHITE FIR • CALIFORNIA DOUGLAS FIR • CALIFORNIA INCENSE CEDAR

Caen Stone Foyers Appropriate for Apartment Buildings

SINCE the public space in an apartment building brings in no direct revenue, it is a burden on the rentable portion; and it is a double burden if it has to be redecorated every few years.

Interiors of Caen Stone never have to be redecorated throughout the life of the building. The

beauty and charm of natural Caen Stone may be secured by the use of Imported Caen Stone Cement with an appreciable saving both in time and money.

Details, caps, balusters, etc., are cast in glue molds. Moldings are run with a templet. Wall surfaces are applied like plaster.

*Illustrated Specification Book Upon Request
AIA File No. 21-b-3*

PALMER LIME & CEMENT COMPANY

103 Park Avenue

New York, N. Y.

A Copper Screen Cloth Which Is *Stiff* As Well As Durable

In Jersey Insect Screen Cloth architects find, combined with unsurpassed durability of unalloyed copper (99.8% pure) a stiffness and tensile strength comparable to that of steel.

This is due to a special Roebling process for making the copper wire used exclusively in making Jersey. And it is *this* feature which puts Jersey Copper Screen Cloth in a class by itself.

You may specify Jersey with confidence that it is unrivaled by any other insect screen cloth.

May we send you samples? A word from you will bring them and you may rest assured that no annoying sales efforts will follow.

THE NEW JERSEY WIRE CLOTH COMPANY
616 South Broad Street
Trenton New Jersey

TRADE **JERSEY** MARK

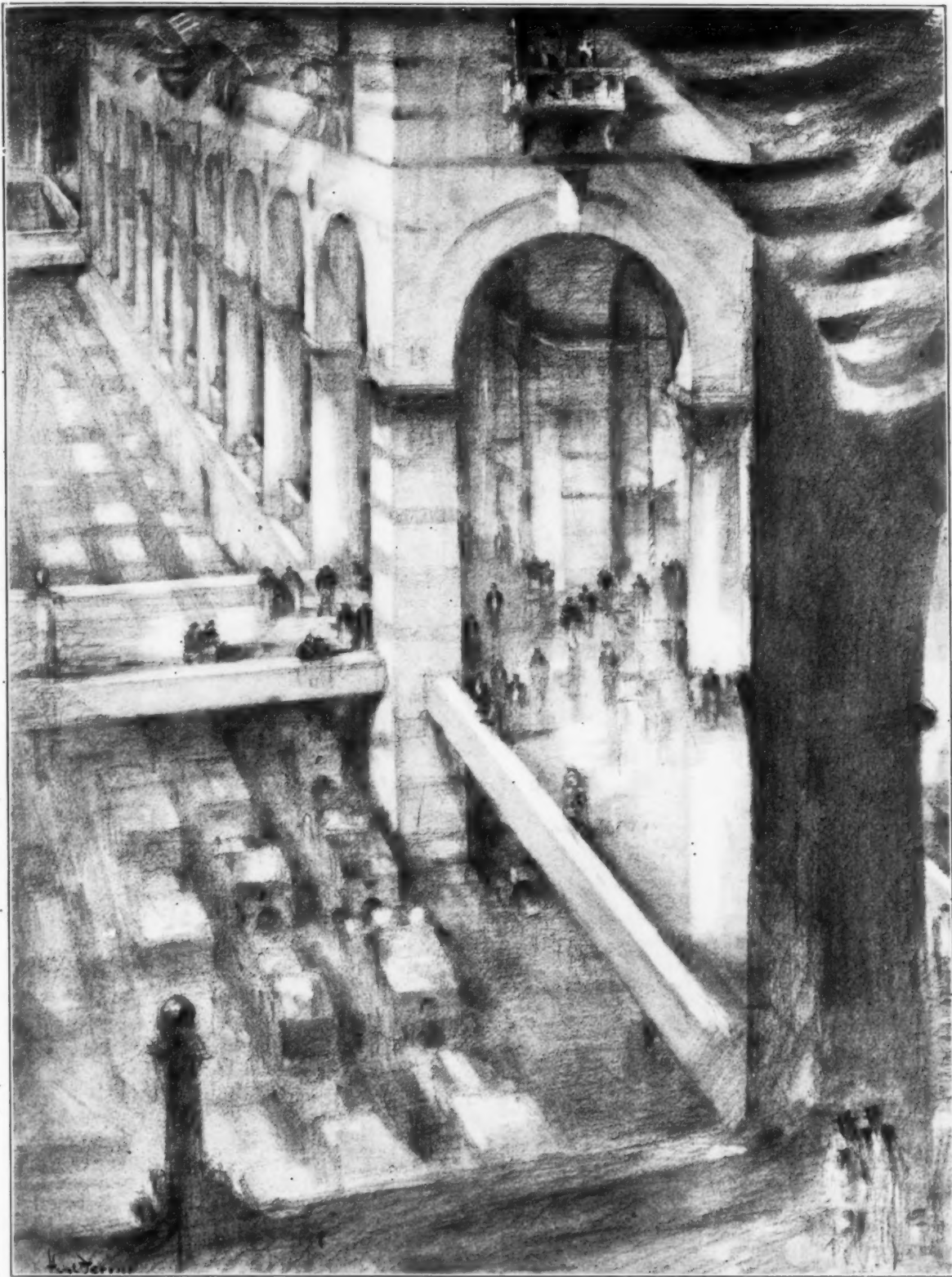
Copper Screen Cloth
Made of Copper 99.8% Pure

THE CUTLER MAIL CHUTE

*manufactured in our own factory and
installed by our own Experienced
Factory Erectors, insuring uniform ex-
cellence of workmanship and prompt
and satisfactory service.*

*Specify MODEL F Standard Equipment
for Cutler quality at minimum cost. Send
for form giving information required
for estimating.*

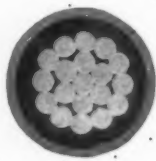
CUTLER MAIL CHUTE CO.
ROCHESTER, N. Y.



TOWARD TOMORROW WITH LEHIGH CEMENT

THOROUGHFARES of two-levels offer the greatest relief from traffic congestion in the opinion of many architects and engineers who are looking "toward tomorrow." The increasing demand for concrete construction will find Lehigh shaping its policy with eyes to future needs, just as today it is meeting all requirements with nineteen mills from coast to coast.

Any architect or engineer can secure the series of renderings by Hugh Ferriss—"Toward Tomorrow," of which the above is one. Address Lehigh Portland Cement Company, Allentown, Pennsylvania, or Chicago, Illinois.



SIMPLEX WIRES AND CABLES

SIMCORE - National Electrical Code Standard. Every length is subjected to searching electrical tests to insure a first quality product. Ask for specifications.

CAOUTCHOUC - "B. C." A rubber covered braided wire insulated with a 30% Para compound. Send for specifications.

LEAD COVERED CABLES AND WIRES - For underground distribution where a conduit system is used.

STEEL TAPED CABLE - Used where a conduit system is not available. It carries its own conduit. Descriptive booklet upon request.

CONDEX PARK CABLE - Adequately insulated and protected by an overlapping, interlocking flexible steel conduit. For series lighting circuits.

OVERHEAD SERVICE CABLE - Designed for use between pole and house where service is not carried underground.

FIBREX OVERHEAD SERVICE CABLE - For aerial service connection from pole to house when service must pass through trees.

FIBREX TREE WIRE - For installation among trees or where chafing may occur. It is non-inductive. Send for circular.

FIBREX FIRE ALARM CABLE - Consists of a multiple conductor cable protected with the abrasion resisting fiber tape which protects FIBREX Tree Wire and FIBREX Overhead Service Cable.

SUBMARINE CABLES - For power transmission or for telephone or telegraph service. Our engineering department is always available for consultation.

SIGNAL CABLE - Dependable insulated cable for railway signals and police or fire alarm service.

IGNITION WIRES - Used extensively, and with satisfaction throughout the automotive field.

TIREX PORTABLE CORD - For electrical tools and appliances. Rubber-armored. Flexible. It cannot kink, and has the wearing qualities of an automobile tire.

TIREX SJ CORD - A rubber armored cord for drop lights or table lamps; made in colors. Send for folder.

TIREX MINING MACHINE CABLES - Heavily insulated, rubber-armored, portable cables with the wearing qualities of a cord tire.

POLE FIXTURE CABLE - For wiring from the base of ornamental lighting standards to the lamp fixture at the top or from line to lamp on goose neck fixtures.

ARC CABLE - For connecting swinging arc lamps with transmission lines.

AUTOMOBILE - Wires and cables for lighting and ignition systems.

RUBBER INSULATED CABLES - For any commercial voltage. Special descriptive bulletin on request.

CAMBRIC INSULATED CABLES - For power transmission service, submarine, underground or aerial. Special bulletin on request.

PAPER INSULATED CABLES - For high voltage power transmission. Descriptive bulletin upon request.

SPECIAL INSULATED WIRES AND CABLES - To meet any conditions of service. On specification drawn by our engineers or to conform to customers' specifications.

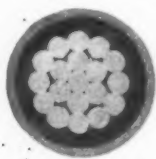
Technically trained experts who know how to impart the qualities which insure satisfactory service supervise the manufacture of all Simplex Wires and Cables.

SIMPLEX WIRE & CABLE CO

MANUFACTURERS

201 DEVONSHIRE ST., BOSTON

CHICAGO SAN FRANCISCO NEW YORK



He'll thank you for the hint

YOUR piping contractor will thank you for this hint—Grinnell Pipe Hangers. Their use will cut his labor costs just as they have always cut ours. And we've used a dozen million of them. For yourself, you'll get a piping equipment that can always be kept in perfect alignment through the simple adjustable features of these hangers.

These hangers grew out of the practical suggestions of experienced Grinnell construction foremen. That's why they solve actual field problems of hanging pipe and radiators anywhere. Since they can be bought on the open market, why be content with anything less than the best?



Use a
dozen
and see why
we've used
a dozen
million

SEND for our free 120-page catalogue. If your jobber doesn't stock Grinnell Hangers, ask us for the name of the nearest distributor. Address Grinnell Co., Inc., 285 W. Exchange St., Providence, R. I.

GRINNELL ADJUSTABLE PIPE HANGERS

Banishes Garbage—Attracts Tenants —Cuts Upkeep Costs

Architects, builders and realtors everywhere have found the time-tried Kernerator a wise investment. For, with one moderate cost (there's no operating expense whatever) it removes forever the problem of garbage and waste disposal, enhances the attractiveness of the premises, promotes contentment of both tenants and building help, and eliminates the fire hazard of the old refuse pile.

Handles all garbage in manner shown in picture—uses no fuel of any kind—requires merely an occasional lighting. Metallic objects (tin cans and the like) are flame-sterilized for removal with the ashes. Thousands in use for years. Guaranteed.

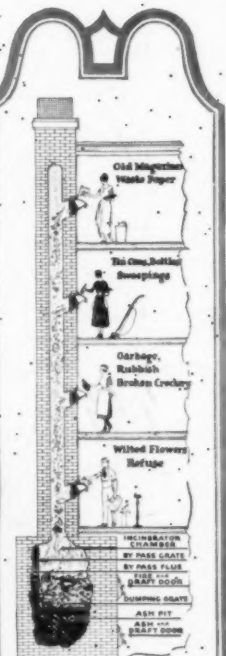
For more detailed information, consult Sweet's (1925) Pages 2800-01, or write

KERNER INCINERATOR CO.
715 East Water St. Milwaukee, Wis.

Drop all waste
in handy hop-
per door—then
FORGET it!



KERNERATOR
Built-in-the-Chimney



Here is a typical Kernerator installation. It costs no more than a good radio set and you get rid of the garbage nuisance forever.

Keep Right On Building This Winter

Bears and ground hogs still hibernate. But engineers, architects, contractors and building owners don't let winter drive them to cover.

They know that "time is money"—that winter is just as good as any other time to build; so they keep on building in cold weather.

The building industry, as well as the public, recognizes that this practice is not only practical but usually profitable for all concerned.

Winter construction means that builders can continue their work without interruption through twelve months. The builder's crew, which has been trained to maximum efficiency, can be kept intact and steadily employed with profit to everyone.

Winter construction by providing quicker occupancy, brings to the owner an earlier return on his investment.

During the winter there are few delays in getting material. Sand and stone are usually nearby; cement is obtainable on short notice practically anywhere. And these materials come to you ready for use—you make your building right on the job.

In winter, as in summer, concrete is the last word in speed of construction—the champion time saver.

If you have not yet experienced the advantages of winter building, plan now to do so.

And remember, where "time is money" use concrete.

* * *

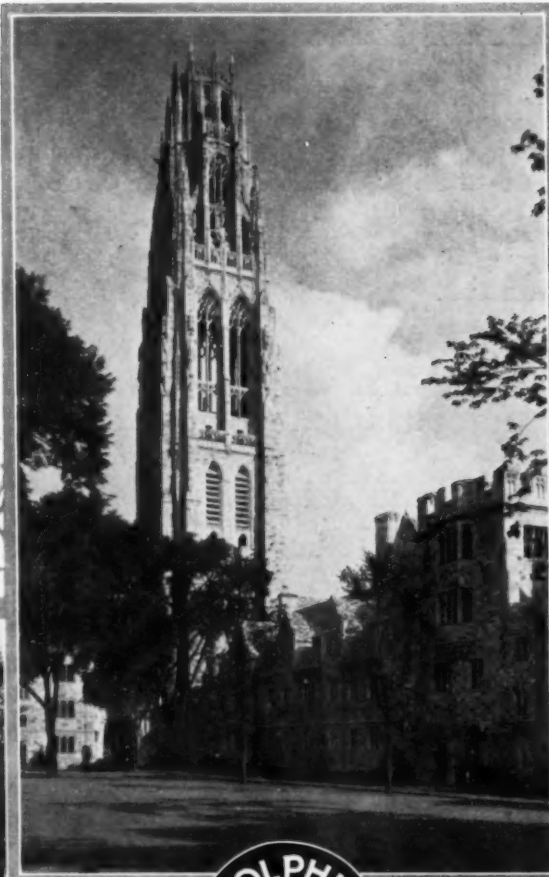
The few fundamental principles of cold weather construction are simple and easy to apply. If you are not familiar with them, ask our nearest District Office for literature on winter building. There is no obligation.

PORTLAND CEMENT ASSOCIATION

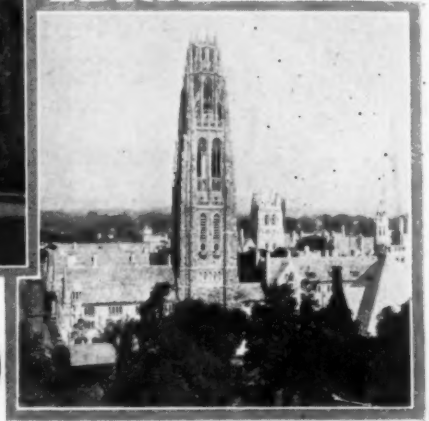
A National Organization to Improve and Extend the Uses of Concrete

Atlanta	Columbus	Indianapolis	Minneapolis	Parkersburg	San Francisco
Birmingham	Dallas	Jacksonville	Nashville	Philadelphia	Seattle
Boston	Denver	Kansas City	New Orleans	Pittsburgh	St. Louis
Charlotte, N.C.	Des Moines	Los Angeles	New York	Portland, Oreg.	Vancouver, B.C.
Chicago	Detroit	Milwaukee	Oklahoma City	Salt Lake City	Washington, D. C.

The beautiful Harkness Memorial Quadrangle at Yale University—one of the many contributions to American Architecture by James Gamble Rogers, Architect, in which Atlantic Wires and Cables have been used exclusively.



Photographs republished through the courtesy of Yale Alumni Weekly.



Worthiness in Wiring

The increasing interest of the American architect in those high types of wiring materials which are worthy of a place in modern building achievement is reflected in the care with which the components of the electrical system for the Harkness Memorial Quadrangle were selected.

Desire that the electrical system should function safely and without interruption for long years to come led unerringly to the choice of the famous "Triton" grade Atlantic compound as representative of one of the few really noteworthy insulated wires of American manufacture.

Backed by more than a quarter of a century of research and improvement—installed in thousands of

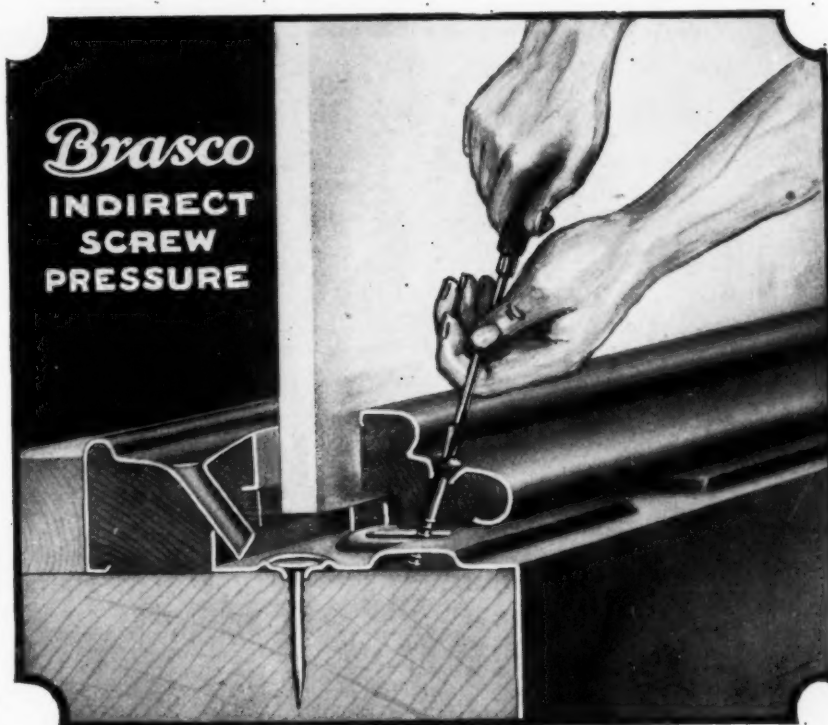
the country's best known structures—and built to one of the most exacting wire and cable specifications ever drawn—Atlantic "Triton" with "Neptune" and "Dolphin" grades cost no more than corresponding brands of less dependability.

Many of America's leading architects and specifying engineers stand ready to testify to the worthiness of these three famous brands of wire and to the lasting satisfaction that their use insures to you and to your clients.

An opportunity to submit detailed specifications, samples for your most exacting inspection or to be of assistance in connection with your standard wire and cable specifications will be welcomed.

Atlantic Insulated Wire and Cable Co., Rome, N. Y.

ATLANTIC
INSULATED WIRE & CABLE
COMPANY



With or Against?

A Vital Factor in Glass Safety



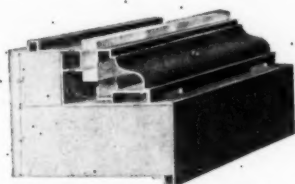
Whether or not the plate glass in a store front will remain intact through years of vibration, stress and strain from traffic and the elements, is solely a matter of the *method of holding it*.

No plate can long stand the direct pressure of screws against it nor contact with screws at its edges. To overcome these hazards and still hold the plate in a firm, supple and uniform grip, Brasco perfected its distinctive *indirect screw pressure* principle, which time has proven to be the safest system ever devised.

The illustration above, clearly shows the screw pressure acting *in the direction* of the plate and never against it. It shows the impossibility of plate and screws ever meeting—it is visible proof of one of the big reasons for Brasco supremacy in records of glass safety.

Other Brasco features are equally outstanding in merit—heavy gauge copper—steel reinforcement in moulding—effective ventilation and drainage—permanent beauty—ease and economy of installation—reasonable cost.

Catalog and details gladly sent on request.



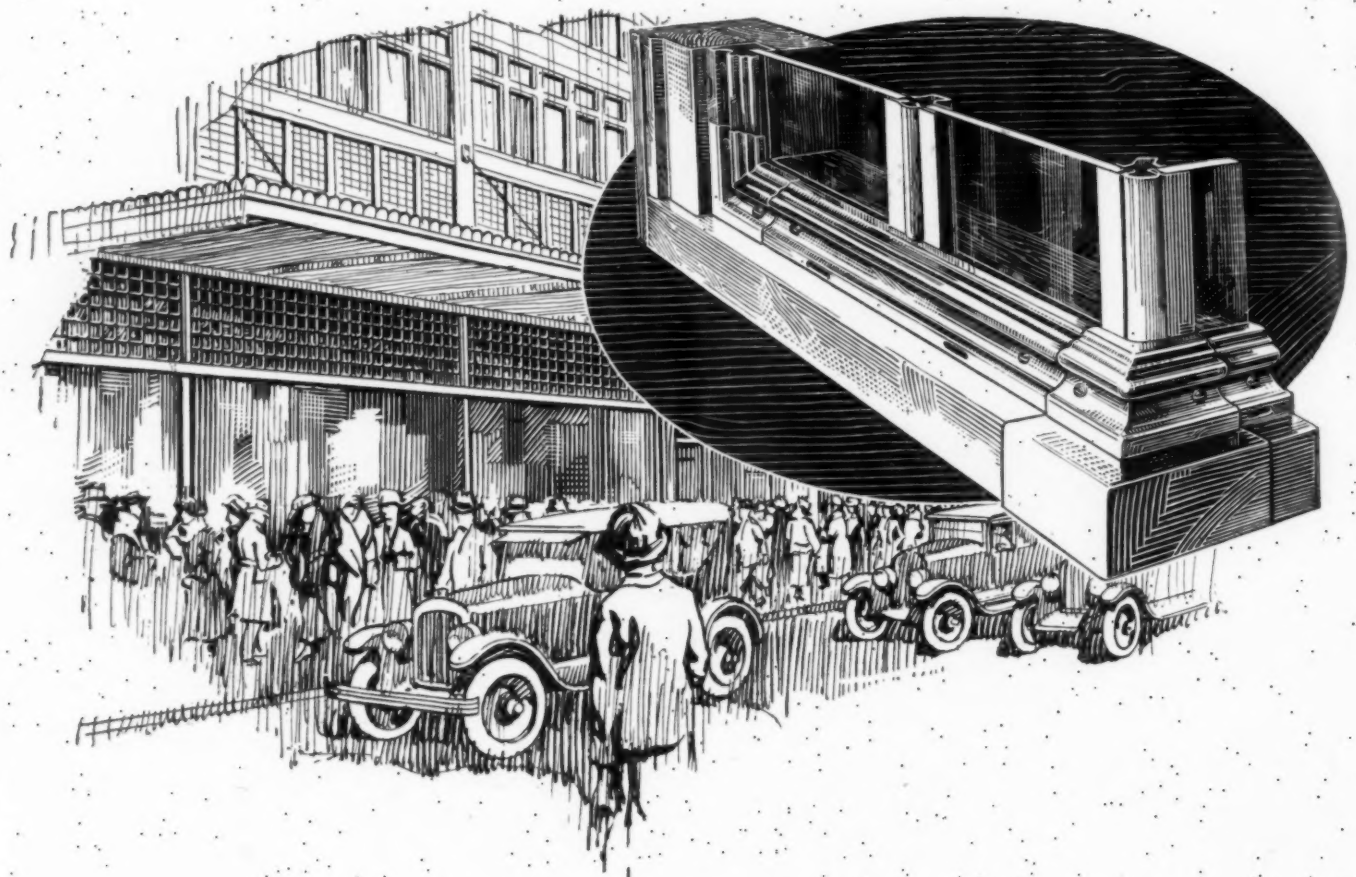
Brasco "500". All Metal Construction. The indirect screw pressure principle is used in this as in all Brasco constructions.

BRASCO MANUFACTURING CO.

5031 Wabash Ave., Chicago

Brasco

COPPER STORE FRONTS



Desco Fronts Become A Part of the Structure Itself

DESCO Store Fronts fit into the picture. They don't look like an after-thought. Their beauty, dignity and strength represent long years of manufacturing experience and constant co-operation with architects.

The wide choice of treatment enables you to blend the right front to the right structure. At moderate cost, no greater than that of the ordinary store front, you create lasting evidence of your good judgment by specifying Desco.

Your request will bring complete working details and a price-list, without obligation. Sweet's Catalog also contains further information. There is a distributor near you. A complete stock of "Desco" construction materials is carried in our New York City Warehouse, 562 West 52nd Street.

DETROIT SHOW CASE CO., 1650 Fort Street West

DETROIT, MICH.

Desco
METAL

STORE FRONTS



THE friction adjuster featured in the pen and ink sketch above is applied to all Kawneer casements. It will hold the sash at any desired angle and without the usual adjustment of thumb screws, etc. They are made of Kawneer Nickel Silver.

THE cozy corner in the living room illustrated above is a splendid representation of solid comfort. The whole setting from the quiet mellow tones of the gray walls to the colorful drapes and the deep-piled rugs, lend a feeling of restfulness and contentment.

Here too the casements play an important part for without them such cheerfulness could never be obtained. They admit warm playful sunbeams and refreshing summer breezes and also defy, through interlocking construction, the intruding blasts of winter.

The Kawneer Solid Nickel Silver Windows shown above are adaptable to any building where durability and positive weathering are desired.

Information pertaining to Windows or Store Fronts will be gladly furnished.

THE
Kawneer
COMPANY
NILES, MICHIGAN



Banner One Name that



Made at Gibsonburg,
Ohio, in the heart of
the World's finest
limestone deposits.

Manufactured by **National Mortar &**

With a Meaning Never Changes

*Banner is labeled "quality" because
quality is the highest standard*

For more than twenty years, Banner and quality have been synonymous.

And the relation shall continue for quality is the standard that was set in the beginning.

From the highest executive to the fellows who load the cars, this big organization is pledged to produce the finest finishing lime obtainable.

Banner users expect to find superiority in Banner Finish because it's made from the country's finest limestone in the world's largest single plant devoted exclusively to the production of only one brand.

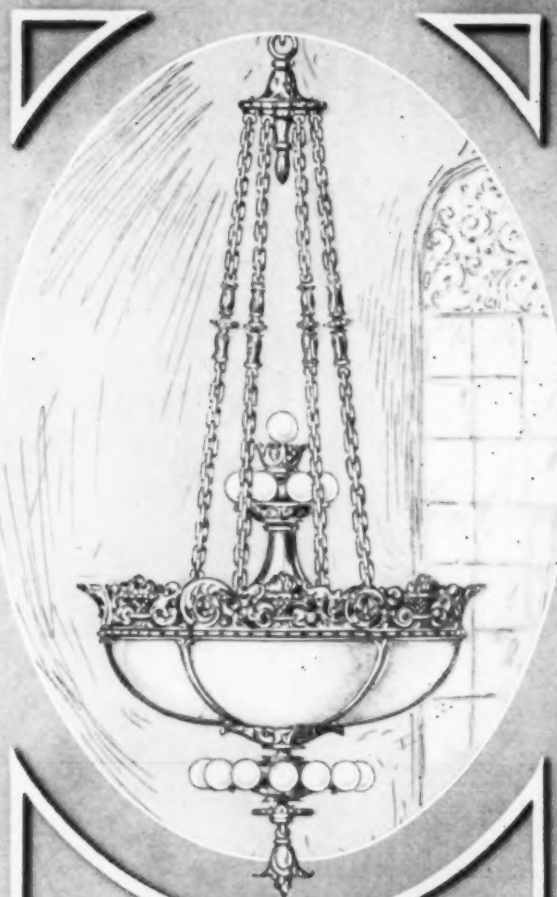
You can depend upon Banner to provide less expensive and more durable walls than any other material because, first, it is strictly a quality product and secondly, a twenty year record in all types of buildings, large and small, proves its every claim.

Specify Banner for the walls of any job you may be planning—it's the easiest, the safest way to be sure of the best.

Banner

*"Easy to Spread—
Hard to Beat"*

Supply Co. Pittsburgh, Pa., U.S.A.



EXQUISITE

It is seldom that the spirit of the Italian Renaissance is so accurately portrayed as in this uniquely beautiful piece. Purity of design is reflected with warmth in every detail of this direct-indirect luminaire

Conceived and Executed
by
The Luminaire Studios, Inc.

A Division of
CURTIS LIGHTING, Inc.
1119 W. Jackson Boulevard
CHICAGO

Engineering Counsel for Architects



KEWANEE'S nation-wide organization of hydraulic-electric engineers will counsel any architect without charge.

KEWANEE men are not salesmen nor ex-plumbers, but trained experts in private water supply, electric light and sewage disposal. Back of them is the KEWANEE quarter century of technical and manufacturing experience and the KEWANEE line of over 200 private utility systems.

We appreciate the architect's needs and problems. We are glad to help draft specifications for proper private utilities to fit the exact needs of each job—from country cottage to million dollar club or estate.

FREE BOOK of Specifications.

Our complete architects' specification book contains a mass of engineering data and specifications on water supply, electric light and sewage disposal. You need it. Sent free. Write for it.

KEWANEE PRIVATE UTILITIES CO.
442 Franklin St., Kewanee, Ill.

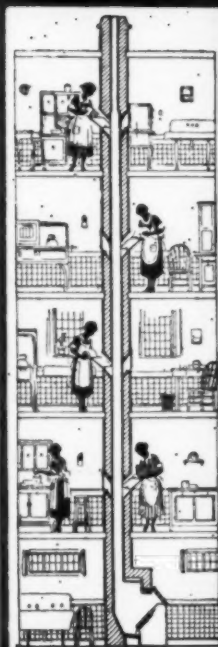
KEWANEE

WATER
LIGHT



SEWAGE
DISPOSAL

GODER INCINERATORS

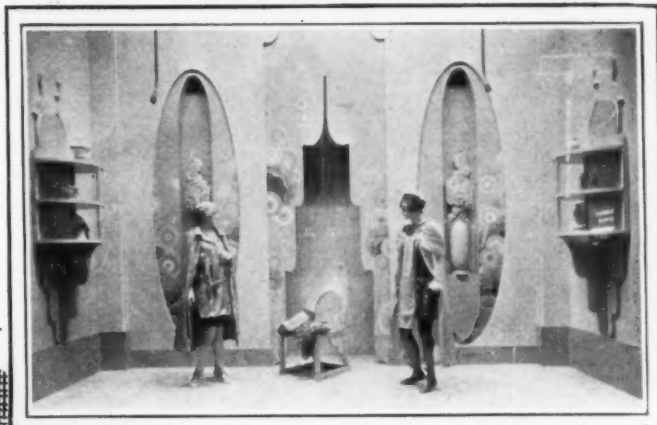


USED BY
U.S. GOVERNMENT
CANADIAN GOVERNMENT
U.S. STEEL CORPORATION
HENRY FORD

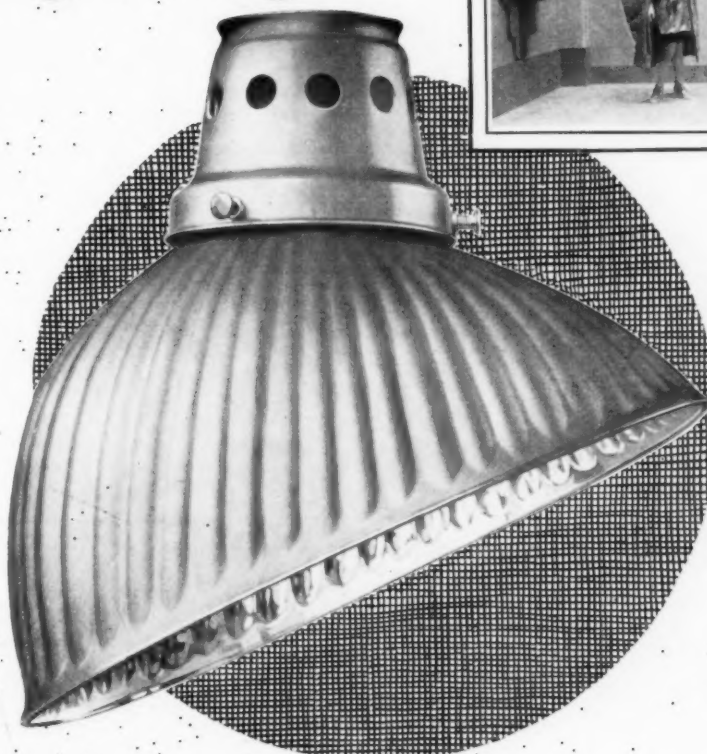
SPECIFIED BY THE
LEADING ARCHITECTS

GODER INCINERATOR
CORPORATION
CHICAGO, ILL.
323 N. MICHIGAN AVE.
PH. CENTR. 0568.

Show Window and Cove Lighting



One of the ten State Street, windows of Marshall Field & Co., Chicago, "Pittsburgh" lighted. Photograph not retouched.



Architects who have clients requiring Show Window or interior Cove Lighting specifications will find "Pittsburgh" specialized service practical and helpful.

We have been active in this field for many years, and many of the finest show window and interior lighting installations in the country have "Pittsburgh" equipment throughout.

"Pittsburgh" Reflectors **stay bright**. Although guaranteed for five years, not one of them made since we began using the coppering process of backing—more than nine years ago—has ever been reported to us as having the silvered reflecting surface tarnish or discolor, or the backing crack, check or peel.

We will gladly send you copies of "Pittsburgh" booklets covering the subjects of show window and cove lighting.

PITTSBURGH REFLECTOR COMPANY

(Formerly Pittsburgh Reflector & Illuminating Co.)

411 BOWMAN BLDG.

THIRD AND ROSS STREETS

PITTSBURGH, PA.

Representatives in Principal Cities

"Pittsburgh"

Silvered REFLECTORS STAY BRIGHT

BRANCH

New York—145 West 41st
Street at Broadway

BRANCH

Chicago—Machinery Hall,
Clinton and W. Washington
Streets

**The New
Smyser-Royer Catalog "J"**

is replete with exactly the kind of information that architects want regarding exterior lighting fixtures.

It is a most complete treatise on lamps, brackets, standards and special exterior lighting fixtures for public buildings, street lighting, large and small estates and private homes.

Copies are reserved for recognized architects. Mailed upon request.

SMYSER-ROYER COMPANY
Main Office & Works · Philadelphia Office
York, Pa. 1609 Sansom Street



Section of Outside Wall of House, Showing Wool Between Studding

Mineral Wool for Building

Mineral Wool has superseded all other materials used for similar building purposes because it does "a great work at little expense." A house lined with Mineral Wool has an indestructible, fire-proof and vermin-proof guard; it protects the entire household. In the winter time it keeps the cold air out, facilitating proper heating and economy in fuel. In the summer it keeps the heat out.

This material, being of fibrous, inelastic composition, acts as a deadener and muffles all sound. It is considered the best insulator material on the market, making it a perfect refrigerating machine.

Mineral Wool makes life-long friends of all its users. If you are skeptical as to its power, let us demonstrate. We can prove all claims. Write us today.

U. S. MINERAL WOOL CO.

280 Madison Avenue, New York



Section of Sound-Proof and Fire-Proof Partition



Trade-Mark

SAMSON SPOT SASH CORD

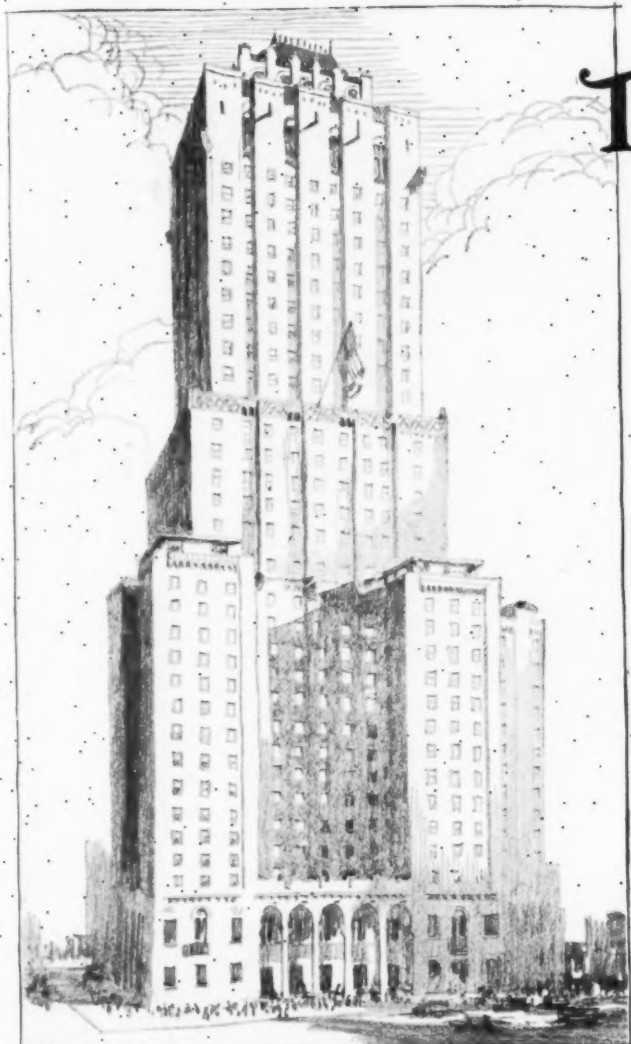


Trade-Mark Reg. U. S. Pat. Off.

MADE of extra quality stock, carefully inspected, and guaranteed free from imperfections of braid or finish. No loaded centre to increase weight and decrease wear.

SEND FOR CATALOG AND SAMPLES

SAMSON CORDAGE WORKS
BOSTON, MASS., U. S. A.



"The Architect—
he lives to build, not boast."

The Skelton Hotel, New York City, in which a large percentage of the fixtures installed are equipped with MONAX GLOBES. Below—"Archer" Model MONAX, an approved type for hotel lighting.



The Shadow Chasers

THE success of any hotel you plan depends as much upon the comfort and convenience you provide for its future guests as upon the beauty of its architecture and interior decorations. One of the greatest comforts any hotel can provide is that of good light. As a matter of fact, adequate light is more than a comfort; it is a necessity.

Adequate light must not be confused with an intense, glaring light that casts sharp Shadow. Glare, the cause of eyestrain and headache, is easily avoided by correct diffusion, and by specifying proper glassware correct diffusion is obtained.

MONAX GLOBES spray a glareless, cheerful light uniformly in all directions, yet absorb scarcely any of it. They eliminate depressing Shadow, once and for all. Easy to clean, their lighting efficiency can always be easily maintained.

Write our Illuminating Engineering Department and ask them to analyze your hotel or any other lighting problems you may have on the boards. There is no obligation.

Macbeth-Evans Glass Company

(Eastern Division)

DEPARTMENT J

CHARLEROI, PENNSYLVANIA

MONAX GLOBES

The Shadow Chasers
for Hotel Lighting

AGLITE

TRADE MARK REGISTERED
PATENT APPLIED FOR



Porcelain Enamel Units



Why Mrs. Winn Blessed the Architect

Both the attractive appearance and soft shadowless light of Guth Aglites had pleased Mrs. Winn from the first day in her new home. And now, with every fixture in her bathroom, pantry, and kitchen glistening white and clean after only a few rubs on each with a damp cloth, she just had to offer up a little prayer for the Architect who specified them.

It was such a delight not to have knobby little screws sticking up to catch dust and snag the cleaning cloth. And to know, too, that no amount of cleaning could ever dim the lustré of Aglite's permanent porcelain enamel finish.

If you would have the lasting good will of your women clients, be sure to specify Aglites wherever porcelain enamel units are needed. We'll be glad to send you literature describing the construction, finish and installation of Aglites. You'll be under no obligation whatever.

The EDWIN E. GUTH COMPANY

DESIGNERS - ENGINEERS - MANUFACTURERS

Lighting Equipment



2629 Washington Ave., St. Louis, Mo.
BRANCH OFFICES (Sales and Service) In Principal Cities

The new building of the Insurance Company of North America, located at Philadelphia, Pa.; Stewardson & Page, Architects; Stone & Webster, Engineers; Hatzel & Buehler, Electrical Contractors.



Holophane Filterlite—furnished with ceiling or hanging fixtures; also available in decorative luminaires of period design.

Big Insurance Companies Endorse Filterlite

INSURANCE COMPANIES make a science of protecting the health and promoting the efficiency of their employees. They also own the largest office buildings. It is doubly significant that so many large Insurance Companies use Holophane Filterlite.

For instance, the new building of the Insurance Company of North America is lighted with

over 3,000 Holophane units. Of these, 2,400 are in offices—all of them Holophane Filterlites. In the corridors the equipment is Holophane Corridor Units; in the open halls, Holophane Reflector-Refractors; and in the service quarters other Holophane units. Each type of Holophane was selected after exhaustive tests including more than a dozen of the leading lighting units.

Other Insurance Companies using Holophane Filterlites are:

New York Life Insurance Company
Employers Liability Insurance Company
Aetna Life Insurance Company

American Insurance Company
Prudential Life Insurance Company
State Mutual Life Assurance Company

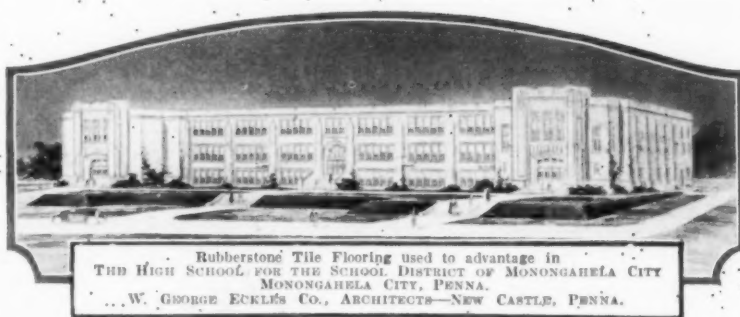
The Holophane units used by these companies are made of prismatic glass, each prism shaped to direct the light exactly as needed. They give better lighting from the same current than is obtainable in any other way.

Our Engineering Department will gladly co-operate with any architect in laying out lighting installations for any job on which he is working or figuring.

HOLOPHANE COMPANY

New York and Toronto

In Schools



Rubberstone Tile Flooring used to advantage in
THE HIGH SCHOOL FOR THE SCHOOL DISTRICT OF MONONGAHELA CITY
MONONGAHELA CITY, PENNA.
... W. GEORGE ECKLES CO., ARCHITECTS—NEW CASTLE, PENNA.

RUBBERSTONE tile—a practical and economical flooring, ideally suited for use in Universities, Colleges, Public Schools, etc.

A real floor—it stands real service, is quiet and comfortable under-foot, non-absorptive and easy to keep clean.

When repairs are necessary, new tiles

can easily be laid, without changing the appearance of the floor.

These intrinsic qualities combine to make Rubberstone tile flooring ideal for classrooms, corridors, auditoriums, gymnasiums, lavatories, etc.

Rubberstone tile is furnished in tan, olive green, terra cotta red, dark brown and black.

RUBBERSTONE CORPORATION

Executive Offices: 1400 Broadway, New York

Chicago

Philadelphia

Distributors in Principal Cities



Page 496

RUBBERSTONE TILE FLOORS *for Permanence*

TRADE MARK REG. U.S. PAT. OFF.

Send for Samples

We shall be pleased to send you complimentary samples of Rubberstone tile and specification data for your files if you will use the handy coupon or have your secretary drop us a line.

RUBBERSTONE CORPORATION

1400 Broadway, New York

Gentlemen:

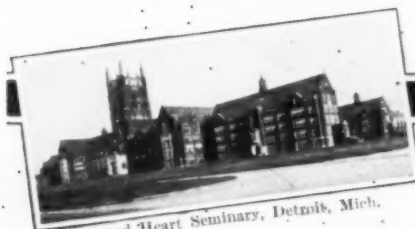
Without obligation, please send us free samples of Rubberstone and specification data for our files.

NAME

FIRM

ADDRESS

ARCH. FORUM—DEC., 1925



Sacred Heart Seminary, Detroit, Mich.



Put the BULL DOG
on your Pay-roll

A Billion Dollars Worth of Modern Structures

If you asked us for direct proof of the practicability and economy of the Bull Dog method of anchoring wood floors to concrete, we could refer you to some of the finest buildings in America. Office buildings, schools, apartments, hotels—models of architectural genius and representing an investment of more than a billion dollars—have been built better and more economically during the past few years with Bull Dog Floor Clips.

Have you a copy of "Six Quick Steps"? It shows exactly how much you save by using the Bull Dog method of floor anchorage. Ask for it and for samples of Bull Dog Floor Clips.

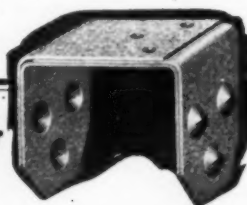
Bull Dog Floor Clip Co.

WINTERSET, IOWA

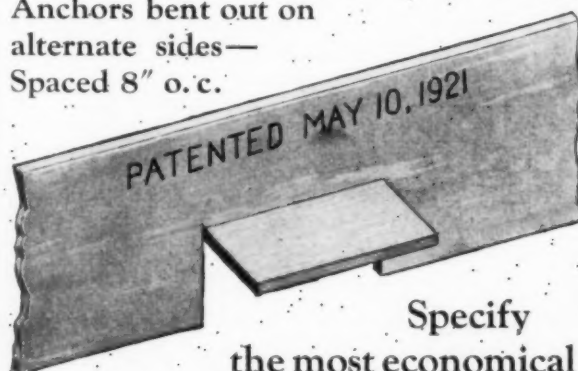
90 Branch Sales Offices

15 Convenient Distributing Points

BULL DOG Floor Clips



Anchors bent out on
alternate sides—
Spaced 8" o.c.



PATENTED MAY 10, 1921

Specify
the most economical
**BRASS TERRAZZO
DIVIDING STRIP**
on the market

Preferred by Practical Terrazzo
Contractors because it is easily
set, provides rigid edges, and
insures perfect alignment.

Standard Specifications for Terrazzo work
sent upon request.

GALASSI COMPANY

224 E. 22nd St.

New York

"U. S." TILE FLOORING



"U. S." Tile
in the labo-
ratory of the
Lenox Hill
Hospital, New
York City.

Floors that combine utility and beauty

It is no longer a matter of choice between the decorative floor and the floor of utility. You can assure your clients both decorative appearance and long-lived utility in the same specification—"U. S." Tile.

"U. S." Tile Flooring, skilfully compounded of finest rubber, fulfills every requisite for satisfactory floor service. Years of experience in rubber floor manufacture have enabled us to perfect a process which strengthens and toughens the

product without detracting from the natural life and resiliency of the rubber.

Service records prove that "U. S." Tile has a durability that approaches permanency. Upkeep costs are reduced to a minimum. Resilient comfort is assured. The unique acoustic properties of "U. S." Tile materially reduce traffic noises. The non-absorbent tiles, tightly cemented together, can not accumulate dirt and germs. Surface stains of dirt, grease, or medicinal solutions are quickly and easily removed.

"U. S. Tile is made in a large variety of attractive designs and color combinations, in either decorative or plain utility styles. The price ranges from \$.75 to \$1.40 per square foot including cost of laying.

Every installation of "U. S." Tile is backed by the reputation of the United States Rubber Company, the world's greatest rubber manufacturer.

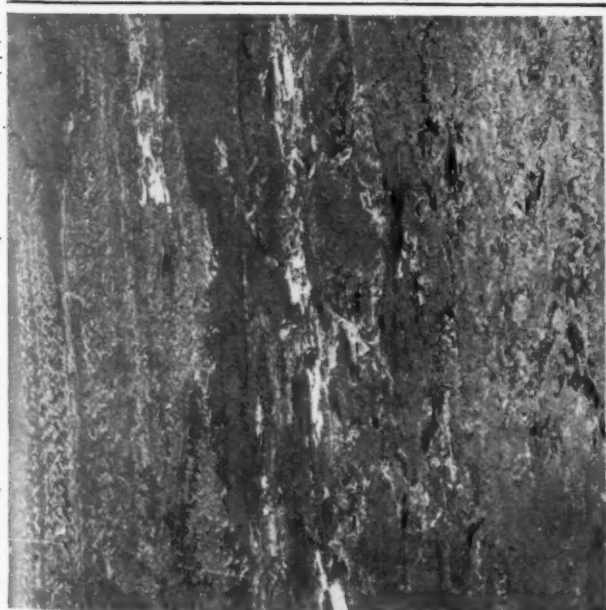
Have you full information and samples of "U. S." Tile in your files? Write for the story of "U. S." Tile today.

United States Rubber Company

Flooring Department

1790 Broadway, New York City

Style T-9, "U. S." Tile installed in Lenox Hill Hospital Laboratory

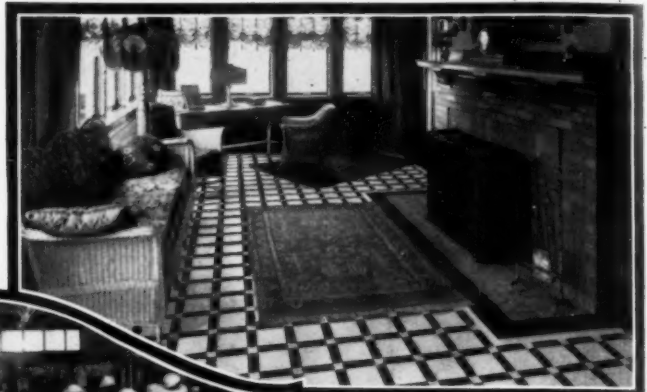


Manufacturers of Rubber Flooring since 1897

The Linotile Trail Over the Continent



In the First National Bank at East St. Louis, Ill., Linotile is installed in the lobby and in the customers' space. The design is 6" x 6" white tile with alternate 2" x 2" black and red tile on the diagonal. The border is black.



In the residence of Mr. Harry C. Stutz, in Indianapolis, the Linotile floor aids in bringing out the beauty of this attractive sun parlor. This floor is composed of tiles 6" x 6" white, 2" x 2" white, 2" x 6" black, with a black and white border.



In the Mosenfelder Store in Rock Island, Ill., the handsome Linotile floor is composed of 6" x 6" light and dark brown tile with 3/4" black joints and dark brown border.

The Midwest Likes Linotile

A FEW TYPICAL MIDWEST INSTALLATIONS

- Anheuser-Busch, Inc., Bevo Plant, St. Louis, Mo.
- Drosden Jewelry Company, St. Louis, Mo.
- St. Liborius Church, St. Louis, Mo.
- Hermann Undertaking Parlors, St. Louis, Mo.
- Missouri Pacific Hospital, St. Louis, Mo.
- German St. Vincent's Orphan Association, Normandy, Mo.
- Mr. Ridgely Young, Architect, (Residence) Wydown Terrace, Mo.
- Stewart Warner Speedometer Co., Chicago, Ill.
- State & Lake Theater, Chicago, Ill.
- Municipal Contagious Hospital, Chicago, Ill.
- Marquette High School, Milwaukee, Wis.
- Herzberg Store, Omaha, Nebr.
- Aquila Court Tea Room, Omaha, Nebr.
- Ft. Armstrong Theater, Rock Island, Ill.

A HOME, a store, and a bank—these, with the typical installations listed at the left, are indicative of the wide range of uses which the thriving and discriminating Midwest has found for Linotile floors.

One of the outstanding features of Linotile is its ready adaptability in color and design to the architectural and decorative plan of almost any type of room. Squares, oblongs, and strips of many sizes in twelve good colors permit of a variety sufficient to meet any requirement. In the colors and designs of Linotile floors are warmth and life for the home,

dignity for the bank or church, or an effective background for store display.

In addition, Linotile is essentially a floor for service. It is resilient and comfortable underfoot and practically noiseless. It is nonabsorbent and sanitary. It retains its "newness." It is easily cleaned. And it lasts for years with practically no trace of wear.

Two books describe Linotile. "Linotile Floors for Residences" and "Linotile Floors for Public and Semi-Public Buildings." Either or both with sample tile will be sent on request.

ARMSTRONG CORK & INSULATION COMPANY

Division of Armstrong Cork Company

132 TWENTY-FOURTH STREET, PITTSBURGH, PA.

Also manufacturers of Armstrong's Cork Tile

Linotile Floors



Eliminating the Step at the Store Entrance



MODERN practice in store front design calls for the elimination of steps between the store and street levels. The use of a steep ramp is often the most practical way to accomplish this. That means a slip-proof walking surface if safety is to be considered.

Norton Floors products are especially suited for the purpose. Their surface is permanently slip-proof. Even water does not affect their non-slip properties. Thus no mats are necessary on rainy days. Norton Floors are unusually wear-resisting. They will stand up under the heaviest traffic.

There is a type of Norton Floor suitable for every class of entrance. Use one for your next store front job. It will win you the permanent good will of your clients.



All types of Norton Floors are made permanently slip-proof, durable and quiet by the bonded electric furnace abrasive trade-marked "Alundum"—long used in the well-known Norton Grinding Wheels.

NORTON COMPANY, WORCESTER, MASS.
New York Chicago Detroit Philadelphia Pittsburgh Hamilton, Ont.

NORTON FLOORS

Alundum Tiles, Treads and Aggregates

FLOORING



(1) Insurance Exchange Building; (3) Lawyers' Building, Boston, COOLIDGE & SHATTUCK, Architects
(2) Central Building, Worcester, Mass., LOCKWOOD GREEN & CO., INC., Architects

REPEATED specification of Duraflex-A Flooring is one of the strongest evidences of its sterling quality and unusual economy. The three buildings above were designed for the same owner—The City Central Corporation—by architects who have repeatedly used Duraflex-A. A half-million square feet of this flooring are in these buildings. Its solid, seamless, rubbery surface is super-durable, resilient, proof against fire, water and acids, and saves 50% of the cost of cleaning and maintenance: Your choice if you will test it!

Write Today for Complete Information

The DURAFLEX COMPANY, Inc.

OFFICES
Boston Philadelphia New York
Baltimore Washington

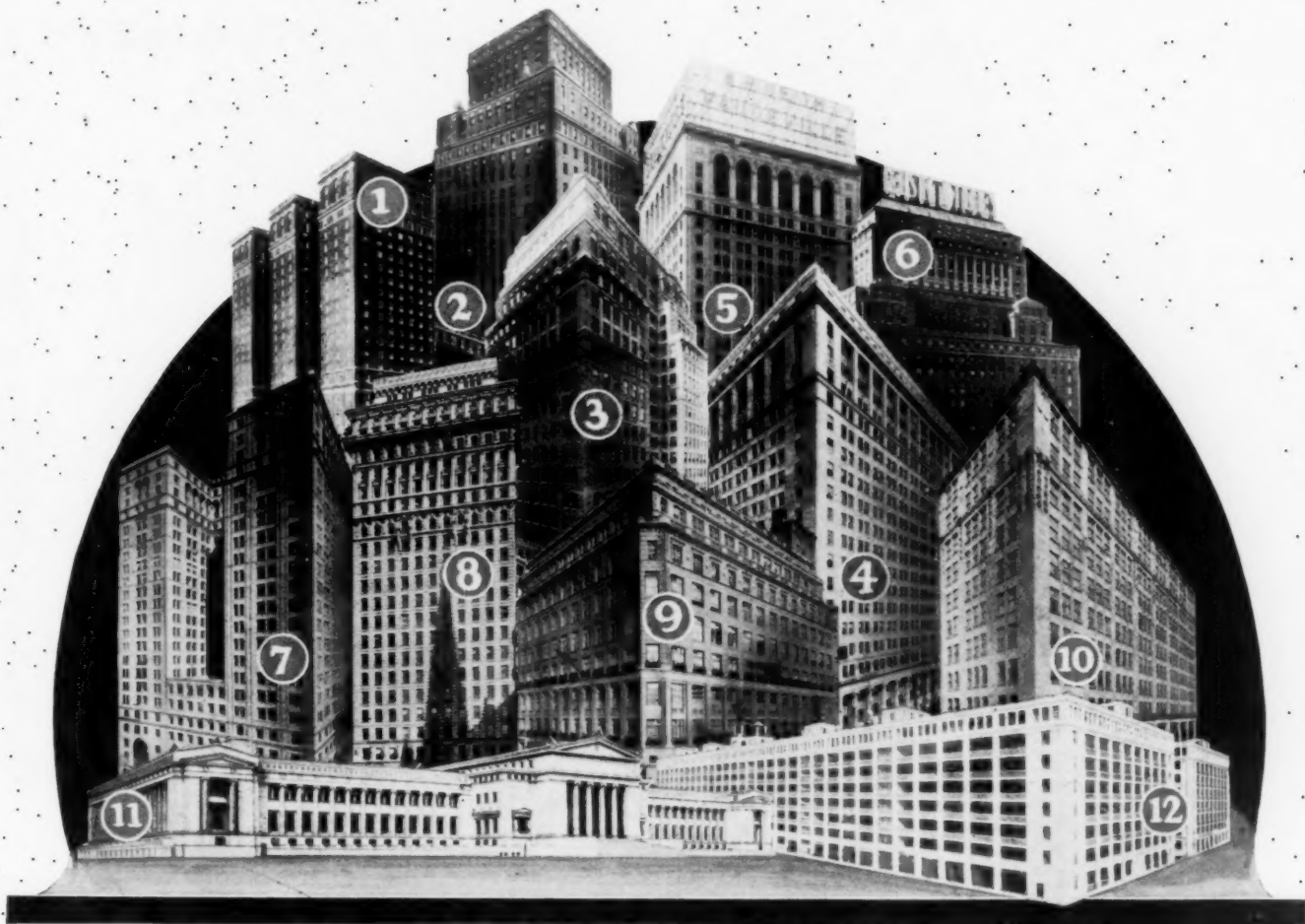
REPRESENTATIVES
Montreal, Can. Richmond
Cincinnati Greensboro, N. C.

Main Office and Plant: BALTIMORE

REPRESENTATIVES
Wilkes-Barre Greenville, S. C.
Reading, Pa. Atlanta
Cumberland, Md. Los Angeles
San Francisco

*There is no Substitute
for Quality Duraflex*

DURAFLEX-A



Here are 12 great buildings.
Do you recognize them?

You recognize their greatness.

Eleven of them were built in winter time.
Yet the cement work was not delayed by
cold, and the brick mortar joints and
floors are waterproofed and hardened.

Why? Because they are

MASTERBUILT with **MASTERMIX**
The Master Builders Co. Cleveland, Ohio.

- | | | | |
|------------------------------|------------------------------|-----------------------------|------------------------------|
| 1. Statler Hotel, Buffalo | 4. Union Trust Co. | 7. Pershing Square Building | 10. Insurance Exchange Bldg. |
| 2. Liggett Building | 5. B. F. Keith Theatre Bldg. | 8. American Surety Building | 11. Field Museum |
| 3. Canadian Pacific Building | 6. Fisk Building | 9. Saks Building | 12. U. S. Naval Base |





Notice the squat appearance of the door at left caused by the horizontal openings. The vertical air passages of the Ventadoor above lend height and distinction to both panel and door.

You can specify efficiency *plus* beauty

ATTENTION to detail often is responsible for the success of a product. With this fact in mind great care was taken that the Ventadoor should be artistically correct as well as efficient.

Two doors are shown above to illustrate this point. In one the air passages of the ventilating panel are horizontal, while in the Ventadoor (at right) they are vertical. Vertical openings were selected because they make the Ventadoor artistic in design and proportions and blend harmoniously with the lines of the door.

The Ventadoor is light and vision-proof, even when open, a feature which adds much to the comfort of the occupants of a room. The ventilating panel, controlled by a small knob, slides easily in marked contrast with the awkward and balky transoms of former days.

We will gladly send you all details relating to construction, specification, cost and installation of Ventadoors to fill your requirements.

VAN ZILE VENTILATING
CORPORATION
280 Madison Avenue, New York City

VENTADOOR
A ventilating panel for doors



136 ft. over shingles, 272 fewer nails per square.

Shingles are self-spacing and 60 lbs. heavier per square.

A Durable and Economical Roof

Ruberoid Giant-shingles give architects and builders a composition shingle of unusual durability in which are embodied unique features of economy.

Extra size, extra thickness and unusual rigidity, coupled with the superior quality inherent in every Ruberoid Product, characterize this shingle. It makes a roof which is rugged in appearance and unquestionably the most durable of its kind.

The extra size of Ruberoid Giants and their self-spacing feature reduce the application cost nearly fifty percent over that of ordinary individual shingles. This saving in the cost of application enables you to use a more durable shingle at no increased total expense.

We shall be glad to tell you how this is accomplished. Write us today.

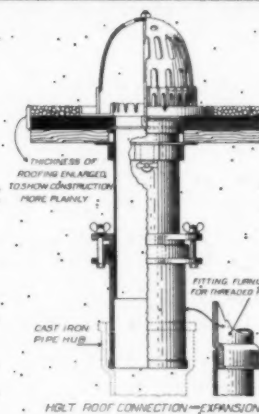
The RUBEROID Co.
95 Madison Avenue, New York
Chicago Boston

RU-BER-OID
Giant-shingles



There is but one Ruberoid. Look for the Man on the Label.

HOLT ROOF CONNECTIONS



HOLT ROOF CONNECTION—EXPANSION JOINT

HERE'S a cross-view section of Type 1 Holt Roof Connection. This type is used as a leader outlet on all flat roofs having interior drainage, except roofs covered with tile, brick or similar material.

Holt Roof Connections, with their air-tight, water-tight expansion joint, overcome all the defects of both rigid and loose-joint leader connections.

THE BARRETT COMPANY
40 Rector Street, New York City

The Barrett Company, Limited
2021 St. Hubert Street, Montreal, Quebec, Canada

Armstrong's Linoleum

for Every Floor in the House

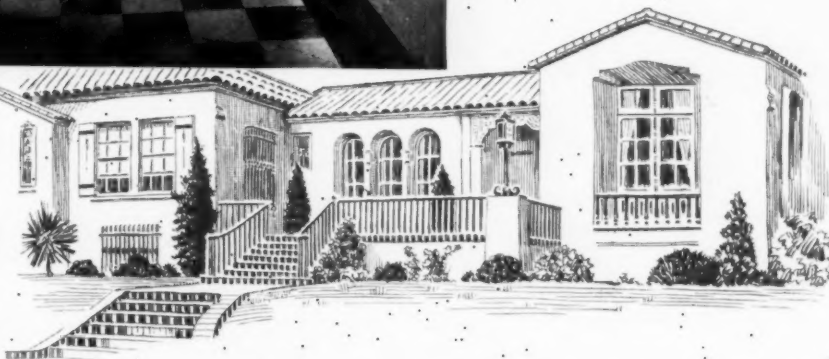
Look for the
CIRCLE A
trademark on
the burlap back



*How a California Realtor
Made His Model House More
Attractive by Using Linoleum*

Here you see a glimpse of the entrance hall of a model home erected on Monterey Boulevard in Westwood Highlands, a suburb of San Francisco, by the California realty firm of Baldwin & Howell. The floor is Armstrong's Linoleum—a Marble Inlaid pattern, No. 72, with a narrow border of plain black linoleum.

Yes, It's Nice Enough
For Even the Finest
Of Your Fine Houses



"COULD I suggest such a thing as linoleum floors to my well-to-do clients—to a client, for instance, to whom the idea of economy is not a major appeal?"

If that's your thought as you see an Armstrong advertisement in magazine or newspaper, then here's some information you may be glad to get.

There are at least five real appeals, five big reasons why floors of modern Armstrong's Linoleum are as good for the \$75,000 residence as for Mrs. Hogan's modest cottage. And here they are:

1. Style. Decorators on the Avenue, not to mention dozens of leading architects, not only recommend but actually are using Armstrong's Linoleum today to give atmosphere, charm, and distinction to the rooms of their houses.

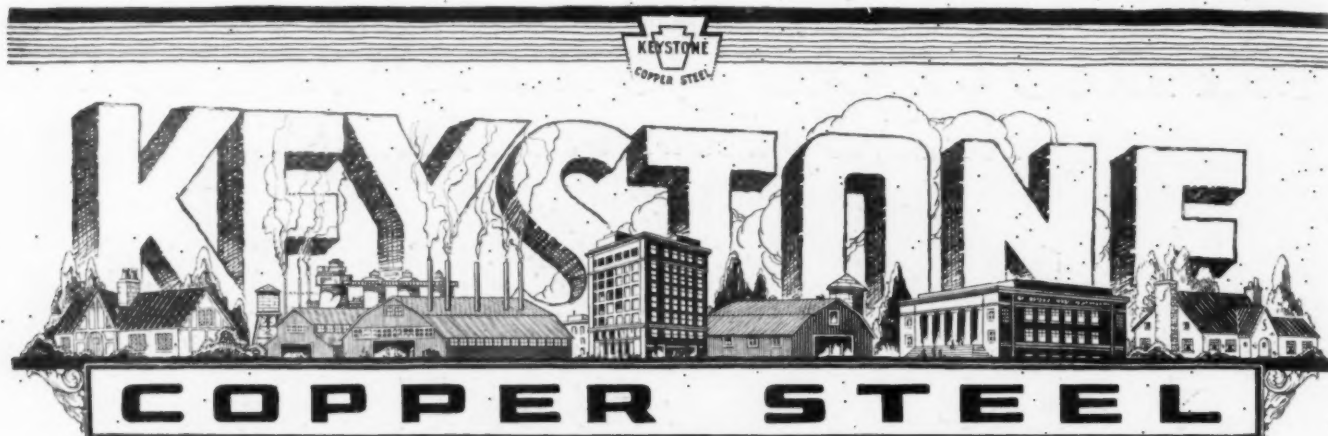
2. Beauty. It's time now to forget the fact of linoleum's kitchen origin. Like Cinderella, modern linoleum has a beauty all its own. Ask to see our designs and you'll realize that this is so.

3. Durability. There are scores of cases on record where linoleum floors have seen forty and fifty years of service. It hasn't had time yet to wear out. Lay linoleum right and take the proper care of it and it's a permanent floor material—no more temporary than the rest of the interior trim.

4. Comfort. When you step on linoleum you feel the resilience of cork and rubber-like oxidized oil—you don't slip, you walk quietly and comfortably.

5. Maintenance. It's actually cheaper to wax and polish linoleum than to mop or scrub or wash any kind of floors. Think of eliminating the annoyance and disagreeableness on the one hand of wet mop and scrub brush, and on the other of periodic scraping and refinishing.

To get properly acquainted with this splendid flooring—linoleum—you should have our new book, "The Attractive Home, How To Plan Its Decoration." We'll be glad to mail you a copy if you'll write us for it. Address: Armstrong Cork Company, Linoleum Division, Lancaster, Pa.



Unequaled for Black and Galvanized Sheets and Roofing Tin Plates. Keystone Quality gives greatest rust-resistance for roofing, siding, spouting, gutters, metal lath, and all exposed sheet metal work in the building construction field.

We are manufacturers of Sheet and Tin Mill products for all purposes—Black Sheets, Apollo and Apollo-Keystone Galvanized Sheets, Corrugated Sheets, Formed Roofing and Siding Products, Sheets for Special Purposes, Roofing Tin Plates, Bright Tin Plate, Black Plate, Etc. Sold by leading metal merchants.

Remember, when resistance to rust is a factor, it is important that you demand Keystone quality. Its greatest testimonial is its users.

Important railroads use Keystone for car roofing and new car construction.

The U. S. Reclamation Service, the U. S. Forestry Service, and Bureau of Public Roads use Keystone for construction of culverts and flumes.

Prominent septic tank and vault makers use Keystone for greater durability.

Successful architects, engineers, contractors, roofers and builders use Keystone for maximum wear and rust-resistance.

Leading burial vault and casket manufacturers use Keystone for increased permanence and protection underground, where both service and sentiment demand enduring quality.

Keystone Copper Steel demonstrated its excellence in the service tests of the American Society for Testing Materials. Could you ask for more thorough and impartial proof?

Users everywhere favor Keystone for all purposes requiring lasting service. Send for "Facts."

American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES

Chicago. Cincinnati. Denver. Detroit. New Orleans. New York. Philadelphia. Pittsburgh. St. Louis.
Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City
Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle



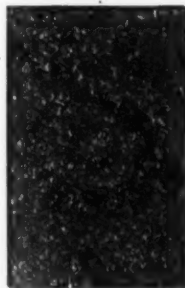
The distinctive SHADOW LINE *that architects must have*

THE unusual thickness of "Massive" Weight Preston Shingles creates the definite shadow line that architects demand. It produces a roof that is thoroughly pleasing on the most exacting jobs.

This massive weight is much thicker than any other slate surfaced asphalt shingle on the market. It is approximately one-third thicker than a standard No. 1 slate shingle. Preston Rectangular Shingles are also made in "Extra Heavy" weight which is approximately as thick

as a standard slate shingle.

Preston Massive Rectangular Shingles are made in three colors, Red, Blue-black and Sunset. Preston "Extra Heavy" Rectangular Shingles are made in four colors, Red, Blue-black, Green and Sunset.




The colors of Preston Shingles are produced by the natural tints of the slate and stone particles with which they are surfaced.

We shall be glad to send you samples of Preston Roofing.

KEYSTONE ROOFING MANUFACTURING CO.

Dept. D12, York, Pennsylvania

HK **Preston**  **ROOFING** *HK*



PENRHYN STONE is the product of a series of quarries operating in the Penrhyn Hills on the border line of the State of Vermont.

The wonderful texture and coloring of this material allows of harmonious combinations that are adaptable to any type of Architecture or period reproduction. The various shades and variegated colorings of Purple, Grey, Green, Brown, etc., are so intermingled and weathered that a newly laid roof has all the aged appearance that is characteristic of the roofs on the ancient Castles and homes in England.

Penrhyn Stone is produced by skilled craftsmen and quarried, split, and trimmed entirely by hand into such sizes and thicknesses that each individual roof requires as determined by a study of the Architect's plans.

Our Architectural Department in New York will be pleased to prepare estimates and make suggestions based on any plans submitted—this service is without charge and all plans will be promptly returned.

PENRHYN STONE TERRACE and PORCH FLOORINGS
GARDEN WALKS : SLATE TILE : BASE : COPING : STEPS : ETC.

PENNA. OFFICE
 DRAKE BUILDING
 EASTON, PA.

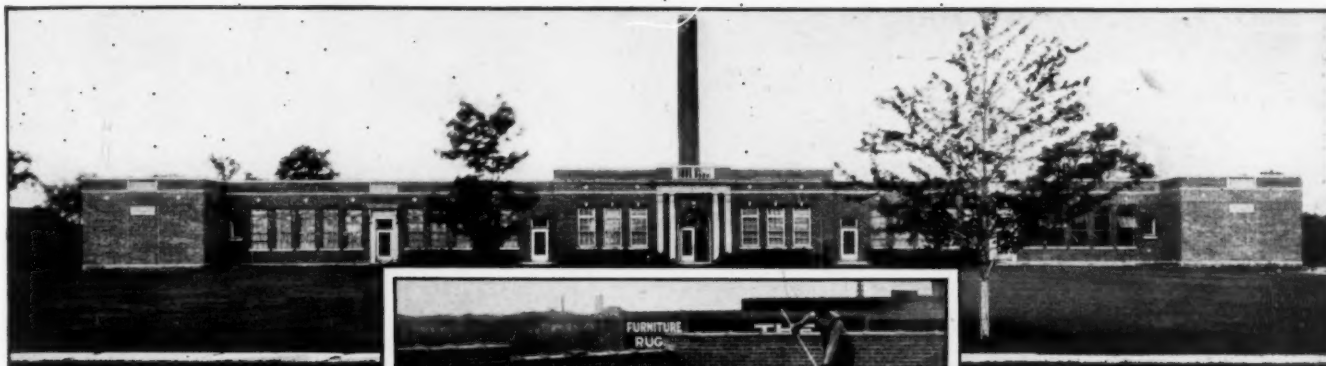
J.W. WILLIAMS SLATE CO.
 (A VERMONT CORPORATION)
 PRODUCERS OF HIGHEST QUALITY
 SLATE ROOFS AND SLATE SPECIALTIES

VERMONT OFFICE
 POULTNEY
 VERMONT

Architectural Service Department: 103 Park Ave., New York

HOLORIB

PATENT APPLIED FOR
TRADE MARK
INSULATED ROOFS



ROOMS UNDER HOLORIB Insulated Roofs on wings of Caledonia School, East Cleveland, O., reach a desired temperature in extreme weather much earlier than those in the main section not roofed with Holorib.

INSERT SHOWS application of Holorib deck, insulation and waterproofing going forward as one continuous operation. Holorib Insulated Roofs can be applied under any weather conditions in which a man can work.

Does Your Roof Leak?

WATERPROOFING is not the only roof protection required. Many a watertight roof leaks heat, thousands of dollars' worth during its lifetime because, while waterproof, it does not provide an impervious barrier to loss of heat.

Holorib Insulated Roofs supply maximum insulation, completely preventing condensation and decay, stopping fuel waste and producing even temperature conditions.

A Holorib Roof deck, the lightest permanent deck in existence, pays for itself by allowing minimum weights of structural members from foundation up, without sacrifice of structural strength.

A complete Holorib unit consists of a steel supporting sheet self reinforced by closed triangular ribs, each rib a complete girder beam. The deck, within its own structure, provides for expansion and contraction. This supporting structure is insulated and waterproofed under Holorib Specifications.

Holorib Roofs are reasonable in price and quickly laid under any conditions. They are highly fire resistive and permanent—ideal roofs for new buildings or for replacement. *Write for full information.*

East Cleveland Board of Education
Office of the Director of Schools
BROWN TECHNICAL SCHOOL
EAST CLEVELAND, OHIO

CHARLES A. TILDEN
Director of Schools

Holorib, Inc.,
2735 Prospect Avenue,
Cleveland, Ohio.

August 18th-1925.

Gentlemen:

One year ago The Gillett Asbestos Company installed Holorib roofs on two wing additions to our Caledonia School, a one story building.

The rooms in these wings are situated at the extreme ends of a long building and have two and one-third walls exposed while the other rooms in the building have a single wall exposed, the rooms having equal glass area and radiation. The roofing over the central portion of the building is wood sheathing covered with three ply felt and asphalt roof.

The operation of this building has proved most interesting. We find that the rooms which heat most quickly are the ones in the wings and generally in extreme weather they reach the desired temperature at least a half an hour before the inside rooms. On days when the weather is very warm, we find that the rooms in the wings remain ten to fifteen degrees cooler than the balance of the rooms which is conclusive that the Holorib roofing contributes very valuable insulating qualities for a comfortable and economical operation of a building.

I am

Very truly yours,

Charles A. Tilden
Director of Schools

HOLORIB, Inc.

2735 Prospect Avenue

CLEVELAND, OHIO



TOPLIFF HALL
DARTMOUTH COLLEGE

LARSON & WELLS
Architects

Modern College Buildings

are modern to the last detail of equipment, and central vacuum cleaning systems are to be found in practically all the newer buildings.

Because of its economy and efficiency The Spencer Central Cleaning System is specified in many of the finest college buildings.

Recent installations include the Dartmouth College buildings illustrated, the Freshmen Dormitories at Harvard, the Lawyers Club, at Michigan, several buildings at Phillips Andover Academy, and at the Massachusetts Institute of Technology.

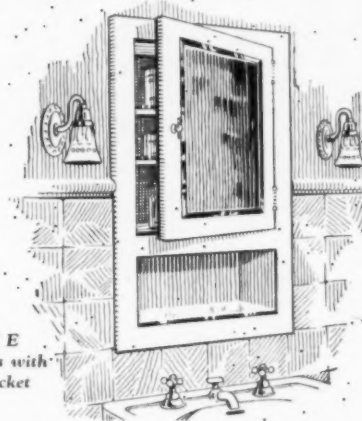
SPENCER TURBINE CO.
HARTFORD, CONN.

SPENCER
CENTRAL
CLEANING
SYSTEMS



RUSSELL SAGE HALL
DARTMOUTH

HESS CABINETS and MIRRORS Snow-White Steel



STYLE E
to recess with
open pocket
below.

HESS Cabinets and Mirrors are **matchless** in their satiny snow-white coats;—**hand rubbed** in the manner the finest furniture is finished. Best polished plate glass mirrors, brass handles and hinges, heavily nickel plated.

They are suitable for the finest bathrooms,—low enough in price for the moderate price builder.

Specify them and please your client; See Sweet's Catalogue.

HESS WARMING & VENTILATING CO.
Makers of Hess-Welded Steel Furnaces.
1216 S. Western Avenue, Chicago



High School, Fremont, Nebraska, A. H. DYER, Architect

The Architect who planned this beautiful building fully realized the absolute necessity of its being properly ventilated and to insure this condition, he specified seven 54-in.

"GLOBE" Ventilators

We are proud of the fact that the "GLOBE" is providing assured and efficient ventilation for school buildings in practically every state in the Union.



Strongly constructed of heavy rust-resisting material and rigidly braced, it can be relied upon to provide absolute and continuous ventilation as long as the building stands.

GLOBE VENTILATOR CO., Dept. F., TROY, N. Y.



Interior of H. S. SNYDER'S residence, Farmersville, Pa.
DUNCAN FRASER, Architect, New York City

Why RADIATORS

No matter how skillfully they may be concealed or adorned, radiators invariably occupy space which might well be put to better use.

With the Kelsey Warm Air Generator, registers are placed inconspicuously in the walls or floors, giving more room for furniture and decorations.

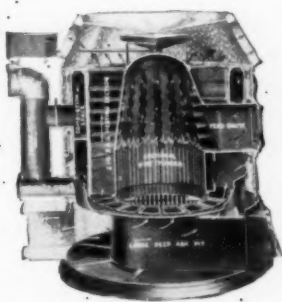
But the main consideration is the quality of the heat. Instead

of dry reheated air, the Kelsey circulates through the house a constant stream of pure, fresh air.

And it is never dry air, with its pernicious effect on both humans and furniture. The Automatic Humidifier adds just enough, and never too much, moisture; in fact, restores the air to its natural condition and conserves the health of the family.

Our booklet, "Kelsey Systems of Heating and Ventilating, Gravity, and Mechanical," is filled with information of value to architects. We will gladly send it upon request.

Our Engineering Department will furnish the Architect with detailed plans and specifications.



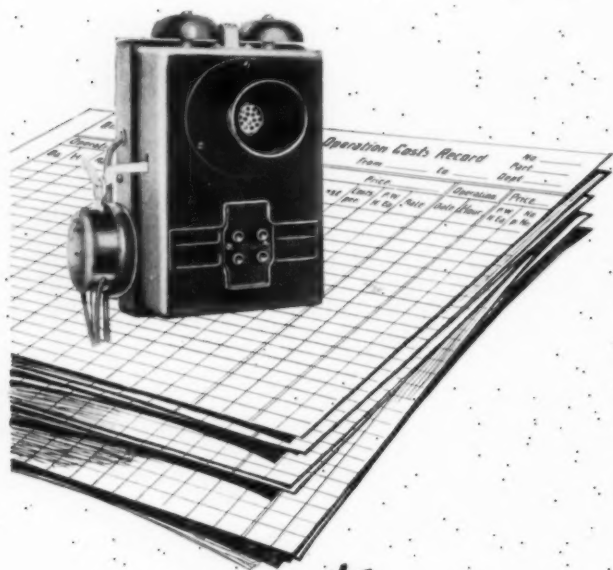
Note the hollow zig zag heating tubes which form the fire-pot and combustion chamber; the long fire travel on all sides of the heating tubes; the extra heating space between inner and outer cases; the automatic humidifier.

Sales Offices
Boston and New York
Brockville, Canada

THE KELSEY
WARM AIR GENERATOR
TRADE MARK REG. U. S. PAT. OFF.
251 JAMES STREET, SYRACUSE, N. Y.

Dealers
Principal Cities





A good way to hold down costs

Operating expenses can be lowered in many industrial organizations simply by holding down wasted time. Western Electric Inter-Phones are effective savers of time.

An Inter-Phone System keeps the whole force at their desks by providing them with automatic, instant intercommunication. It saves steps and promotes the habit of efficiency. It is ready, night and day.

There is a dependable Inter-Phone System for the most complex organization and the simplest. For full data just write to our nearest office.

*Say it
over the Inter-Phone*

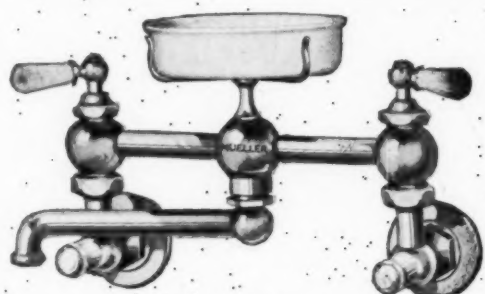
Western Electric

QUALITY ELECTRICAL SUPPLIES

Offices in 54 Principal Cities

 <p>Asbestos Roofings and Shingles —firesafe</p>	 <p>Insulation for hot or cold pipes and surfaces</p>
 <p>Radiator Traps and Steam Traps</p>	 <p>Industrial Flooring</p>
 <p>Orangeburg Underfloor Duct System for electric wiring</p>	<p>Acoustical Correction for offices, hospitals, churches, etc.</p> <p><i>Quiet</i></p>
 <p>Housline for insulating walls and roofs against heat or sound</p>	 <p>Theatre Equipment Waterprooing Building Paper Felts, Stucco, etc.</p>

JOHNS-MANVILLE
JOHNS-MANVILLE, Inc., 292 Madison Ave., at 41st St. New York City
Branches in 94 Large Cities.
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto



Why MUELLER Faucets?

Architects everywhere are specifying Mueller Faucets because they are so thoroughly dependable. They are good looking, too, and harmonize with every type of fixture. Mueller Faucets are available everywhere in styles for every need. Owners know Mueller Faucets because they are nationally advertised.

MUELLER CO.
(Established 1857)

Factories: Decatur, Illinois; Port Huron, Michigan
Canadian Factory: Sarnia
Branches: New York, San Francisco, Los Angeles

MUELLER
faucets without a fault

In Boston, too...



SPENCER HEATERS are saving money for their owners in Boston; Cambridge, Milton, Wellesley, Winchester, Swampscott, Gloucester, Dedham and in almost every other community in the Metropolitan district of Boston.

Spencer Heaters burn No. 1 Buckwheat coal that costs an average of \$6 less per ton than ordinary domestic sizes.

Your clients will appreciate this Spencer economy as well as the fact that this size coal is always available regardless of strikes or shortage.

When, to these advantages are added the labor-saving of the Spencer magazine feed and the comfort of uniform heat, it is not remarkable that architects have been increasingly interested in guiding their clients to the benefits of Spencer Heating.

Your complete confidence in Spencer Heaters is earned by their 25 years of successful operation.

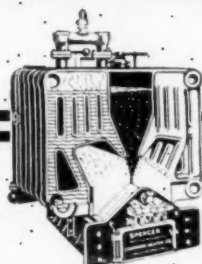
Write for descriptive literature

STANDARD HEATER COMPANY

General Offices:

WILLIAMSPORT, PENNSYLVANIA

New York	Boston	Philadelphia	Baltimore	Detroit
Washington	Schenectady	Buffalo		
Rochester	Lancaster	Harrisburg	Syracuse	Scranton



Spencer
 steam, vapor or hot water
Heaters
 burn No. 1 Buckwheat coal



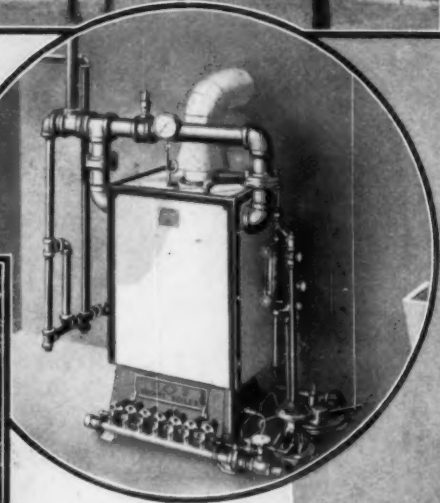
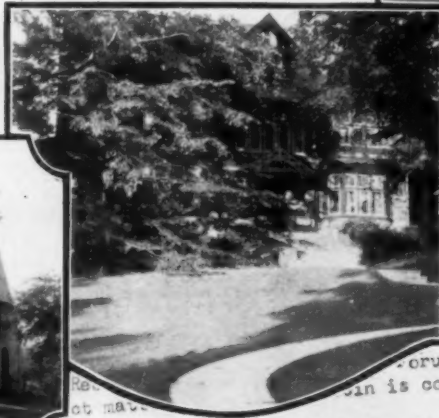
H. I. SCHENCK
A. I. A.

NELSON J. BELL
ARCHITECT

Schenck & Williams
ARCHITECTS

204 202 MUTUAL HOME BLDG.

DAYTON, OHIO



In
s to
on with
Archi-
forum provided.
is correct.

We have used many Bryant Gas Boilers, the writer having just completed an installation in his own home. The product has been so uniformly satisfactory that we are pleased to commend it.

Yours very truly,

SCHENCK & WILLIAMS.

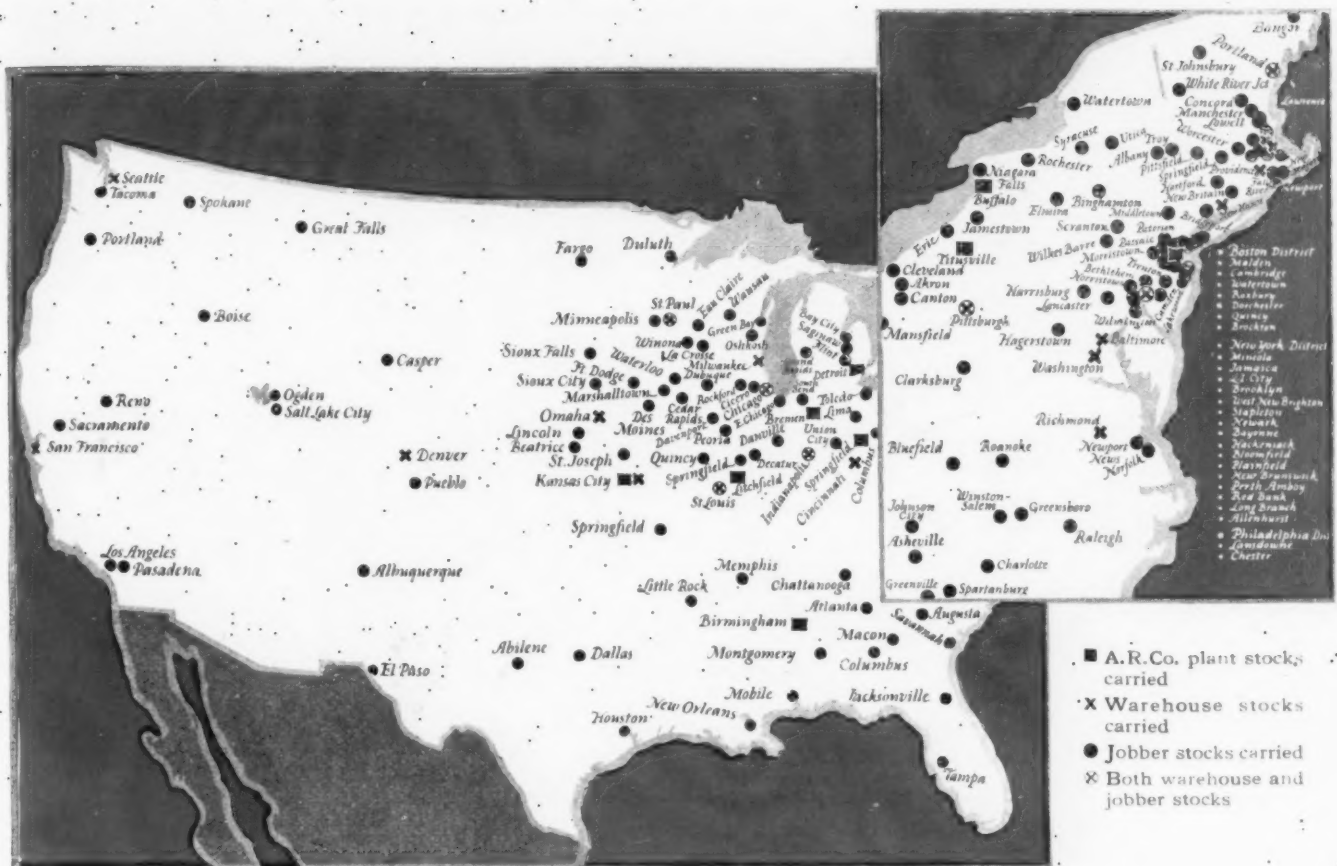
Harry I. Schenck

June Twenty
1925
HIS: A

A good Automatic Gas Heating Plant is probably the greatest single convenience you can include in a home. Appreciation by the owner is certain; satisfaction is sure.

THE BRYANT HEATER & MFG. COMPANY
17862 St. Clair Avenue Cleveland, Ohio
Branches in 21 Principal Cities

BRYANT HEATING
for Hot Water, Steam  Vapor and Warm Air



Every dot

a distribution center for IDEAL BOILERS and AMERICAN RADIATORS

WHEN you specify heating equipment, one of the very important things is delivery at the time the contractor is ready for installation.

To insure prompt delivery we have established stocks of IDEAL Boilers and American Radiators at the points spotted on this map. A

glance will show you how near to your locality stocks are located.

When you are especially in need of quick delivery to the Heating Contractor on the job, put this distribution service to the test—another reason why IDEAL Boilers and American Radiators deserve your specification.

AMERICAN RADIATOR COMPANY

Dept. T-274, 1807 Elmwood Ave., Buffalo, N.Y. Sales Offices in all principal cities

IDEAL BOILERS AND AMERICAN RADIATORS FOR EVERY HEATING NEED





High School, Lake City, Ia., Univent Equipped, Thomas—McLennan & Thomas, Des Moines, Ia., Architects

The Perfect Unity

Beauty that is strength—and utility that is beauty—are the Architect's ideals of Unity.

For this ideal he has labored long, and reconciled elements that were at first apparently irreconcilable.

His harmonizing touch has been responsible for the modifying of methods of sanitation, lighting and ventilation until these once obtrusive, practical necessities are now contributing elements of a unified design of beauty.

UNIVENT

(TRADE MARK)

VENTILATION

Univent Ventilation—fresh-heated air from the window, uniformly distributed in each room without draft—was inspired by the Architect's ideal of Unity. We shall be glad to send a copy of "Univent Ventilation" to architects to show how admirably this more positive and effective ventilating system fits in with their architectural plan.

THE HERMAN NELSON CORPORATION *Moline, Ill.*

BELFAST, ME.
BOSTON
NEW HAVEN
NEW YORK CITY
SYRACUSE

PHILADELPHIA
SCRANTON
PITTSBURG
GRAND RAPIDS
DETROIT

Sales and Service Stations
CLEVELAND
COLUMBUS
TOLEDO
INDIANAPOLIS
DES MOINES
MILWAUKEE
MINNEAPOLIS
ST. LOUIS
CHICAGO

EMPORIA
OMAHA
KANSAS CITY
DENVER
SALT LAKE CITY

SPOKANE
PORTLAND
SEATTLE
VANCOUVER
TORONTO

Now Ventilation Built right into the Kitchen

HERE'S the new Permanent Wall Fixture for the American Blower Reversible Ventilating Fan. It represents the greatest improvement in the modern kitchen since the range replaced the old coal stove. It has ten big advantages, yet its cost is within the reach of all.

Now, more than ever before, home owners demand light, airy kitchens. Now more than ever before architects, investment bankers and builders realize the value and importance of kitchen ventilation.

The New Permanent Wall Fixture is a step in advance. It not only possesses all the advantages of a Reversible Ventura Ventilating Fan, but it eliminates the necessity of shutting off the light through a window installation of a fan, and it does not detract from the most beautiful and artistic interiors.

It enables the kitchen to be placed in any particular part of the house without the fear that odors will escape into living rooms, parlor or downstairs bedrooms.

AMERICAN BLOWER COMPANY, DETROIT
BRANCH OFFICES IN ALL PRINCIPAL CITIES
CANADIAN SIROCCO COMPANY, LIMITED, WINDSOR, ONTARIO

- Built-in ventilation gives you these great advantages:*
1. Increases the value of the home.
 2. Can be included in the first cost of the home.
 3. Adds to the beauty of the kitchen.
 4. Eliminates all drafts.
 5. Gives you a practically non-destructible unit.
 6. Does not shut out any light from the kitchen.
 7. Carries away dirt and grease that settles on the ceilings and walls.
 8. Enables the kitchen to be placed in any position.
 9. Removes foul air, odors, smoke and brings in the clear, fresh atmosphere of outdoors.
 10. It is noiseless, trouble free, and out of the way.



American Blower



VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT

Manufacturers of all Types of Air-Handling Equipment Since 1881



Any manufactured product is more than half sold when it is known and respected by millions of people.

That's why the story of Capitol quality is being broadcasted in a national advertising campaign to the nation.

This campaign, please remember, is working for you day and night. It supports every specification that calls for a Capitol installation.

Capitols have always been fine quality products. They are now recognized by the public as preferred boiler investments.

UNITED STATES RADIATOR CORPORATION

General Offices, Detroit, Michigan

Branch and Sales Offices

*Boston	*Baltimore	*Indianapolis
*Springfield, Mass.	*Buffalo	*Louisville
*Portland, Me.	*Pittsburgh	*St. Paul
*Providence, R. I.	*Cleveland	*St. Louis
*New York	*Columbus	*Kansas City
*New Haven	*Cincinnati	*Des Moines
*Troy, N. Y.	*Detroit	*Omaha
*Brooklyn	*Chicago (So. Side)	*Denver
*Harrison, N. J.	*Chicago (No. Side)	*Seattle
*Philadelphia	*Milwaukee	*Portland, Ore.

*Warehouse stocks carried at points indicated by star

Capitol Boilers

The New Hollywood Hotel

HOLLYWOOD BY THE SEA, FLORIDA

The very latest word in modern hotel construction has installed

Van Equipment for the Preparation & Serving of Food

Van equipment was selected because of

"That Enduring Quality"

a reputation sustained by Van through three quarters of a century.

The New Hollywood Hotel is but another Florida dream come true.

Our engineers will help you or your architects with the arrangement of your equipment to the best advantage.

Recent Contracts Obtained by VAN

Patrick Henry Hotel
(Roanoke, Va.)

Neil House
(Columbus, Ohio).

Fred Harvey System
(Union Sta., Chicago, Ill.)

Tampa Terrace Hotel
(Tampa, Fla.)

Hotel Wyoming
(Orlando, Fla.)

Holman Hotel
(Athens, Ga.)

400 page catalog
on request



CHICAGO
LOUISVILLE
DETROIT
PITTSBURGH
BUFFALO

Southern Display Rooms 215 SPRING ST., ATLANTA, GA.

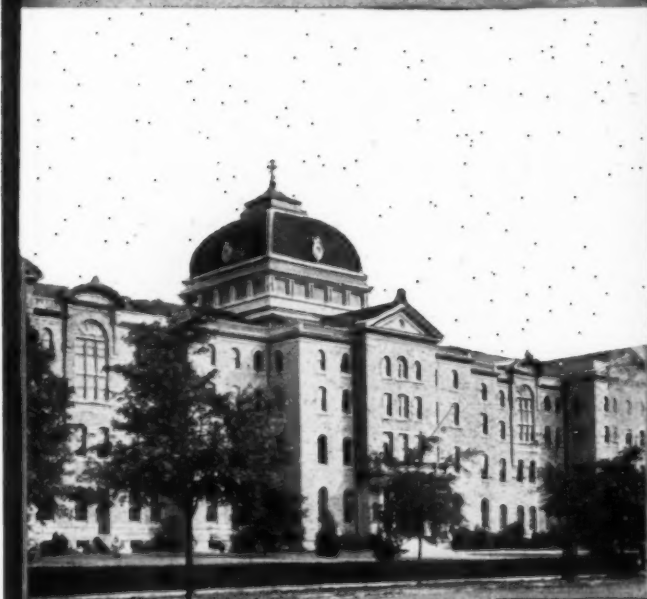
The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD
Cincinnati

NEW ORLEANS
MUSKOGEE
KANSAS CITY
CLEVELAND
ATLANTA

Two Most Vital Factors in

Why You Should Recommend

Exterior of Trinity College, Washington, D. C. This beautiful structure is one of the leading educational institutions in the Capitol City. Of course, its kitchen is VULCAN equipped.

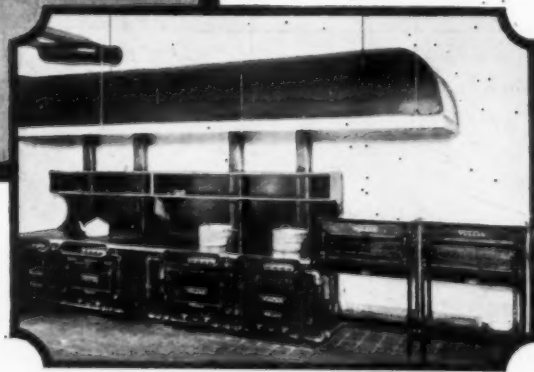


The Problem: Two things are essential in university kitchens—*speed and economy*. Every lunch-hour is rush-hour. Students are anxious to finish their meals quickly so as to have as much time to themselves before returning to classes. And, of course, prices *must* be low.

It is the architect's problem to specify kitchen equipment that will adequately meet these essential requirements. In planning university kitchens remember that only *modern* cooking equipment can make possible this greater speed of service, and this greater economy of operation.

The Solution: The experience of hundreds of the leading colleges and universities has proven GAS to be the fastest, cleanest, most economical fuel for heavy-duty cooking. Gas ranges, because they are easier to control and more economical to operate, are therefore a partial answer to your problem.

But there is one outstanding type of gas range—so far ahead of the others that it has revolutionized cooking with gas fuel. VULCAN Economy Hot-Top Gas Ranges, the *modern* cooking



The modern kitchen of Trinity College where four No. 1751 VULCAN Ranges and two No. 789 Griddles, Broilers and Toasters have been installed by Edgar Morris Sales Company of Washington.



VULCAN

Architects now planning university kitchens should secure a copy of our valuable booklet "Planning College Kitchens to Save Space and Money". Write for your copy today—*gratis*.

Planning University Kitchens

MODERN Cooking Equipment

equipment, offer all the requirements essential for maximum cooking efficiency.

If you want the university you are planning to be modern from roof to cellar, don't neglect the kitchen. Make sure that the cooking equipment is every bit as up-to-date as the elevators and the lighting system. Specify VULCAN Economy Hot-Top Gas Ranges and make certain that the kitchen, as well as the rest of the building, will meet with the thorough approval of even the most critical visitor.

VULCANS guarantee the rapid handling of the lunch-hour rush and enable the restaurant manager to maintain lower prices because of reduced cooking costs. Investigate thoroughly this new-day gas range. We will gladly give you all the facts.

STANDARD GAS EQUIPMENT CORP.

VULCAN Division—Successor to Wm. M. Crane Co.
18-20 EAST 41st STREET • NEW YORK, N. Y.

PACIFIC COAST DISTRIBUTOR

Northwestern Gas & Electric Equipment Co., Portland, Ore.
Branches: San Francisco, Los Angeles

Exterior of La Salle Academy, Providence, R. I.—one of the most imposing examples of school architecture in New England. L. Barth & Co., Inc., of New York has installed four VULCAN Ranges and one VULCAN Combination Broiler and Roaster in this modern school kitchen.



Penn State
Normal
School, West
Chester, Pa.
VULCAN
equipped.

Carnegie
Institute
Museum
and Library
(Pittsburgh)
VULCAN
equipped!



ECONOMY ^{Hot Top} GAS RANGES

Send today for an interesting book "Cutting Cooking Costs". It describes the exclusive features of VULCAN Equipment and explains why you can do more and better cooking, faster, cleaner, and at less cost! Write **today!**





Residence of Edward F. Cagwin, 3275 Braemar Road, Shaker Heights, Cleveland, Ohio. Architects, Brooke & Burrows, Cleveland, Ohio. Kitchen equipped with New Process Lorain-equipped Gas Range. Smaller view below shows the stove installation.

Please Those for Whom You Plan Buildings!

NATURALLY, no architect ever plans a structure without striving to please, thoroughly, those by whom he is employed.

He knows that the keenest appreciation will be his if he advises the installation of the latest, most practical and most efficient equipment.

The architect knows that builders and owners realize that if their structures have the best of labor-saving equipment, homes are rented much more quickly.

This is why so many architects are advising the installation of gas ranges with Lorain Self-regulating Ovens. They know that stoves equipped with the famous Red Wheel, which are advertised extensively and continuously in all leading national magazines to millions of readers, make instant appeal to housewives.

Lorain-equipped Gas Ranges make it possible for the housewife to be away for the entire afternoon while the evening meal (meat, vegetables

and dessert) is being cooked, unwatched, with perfect results. When she returns home at 6 p. m., say, the whole meal is ready to be placed on the table.

The Lorain Oven Heat Regulator is the original oven heat-regulator. It is manufactured and guaranteed by the same company that makes the stoves of which it is a part.

These famous makes of gas ranges are equipped with the Lorain: Quick Meal, Reliable, Clark Jewel, Dangler, Direct Action and New Process.

Lorain-equipped Gas Ranges are made in every approved size, style and finish suitable for houses, schools, churches, apartment buildings—in fact, any structure where cooking is to be done. For specific data, see 19th Edition, Sweet's Catalog, Pages 2497-2506 inclusive. Other data on request.



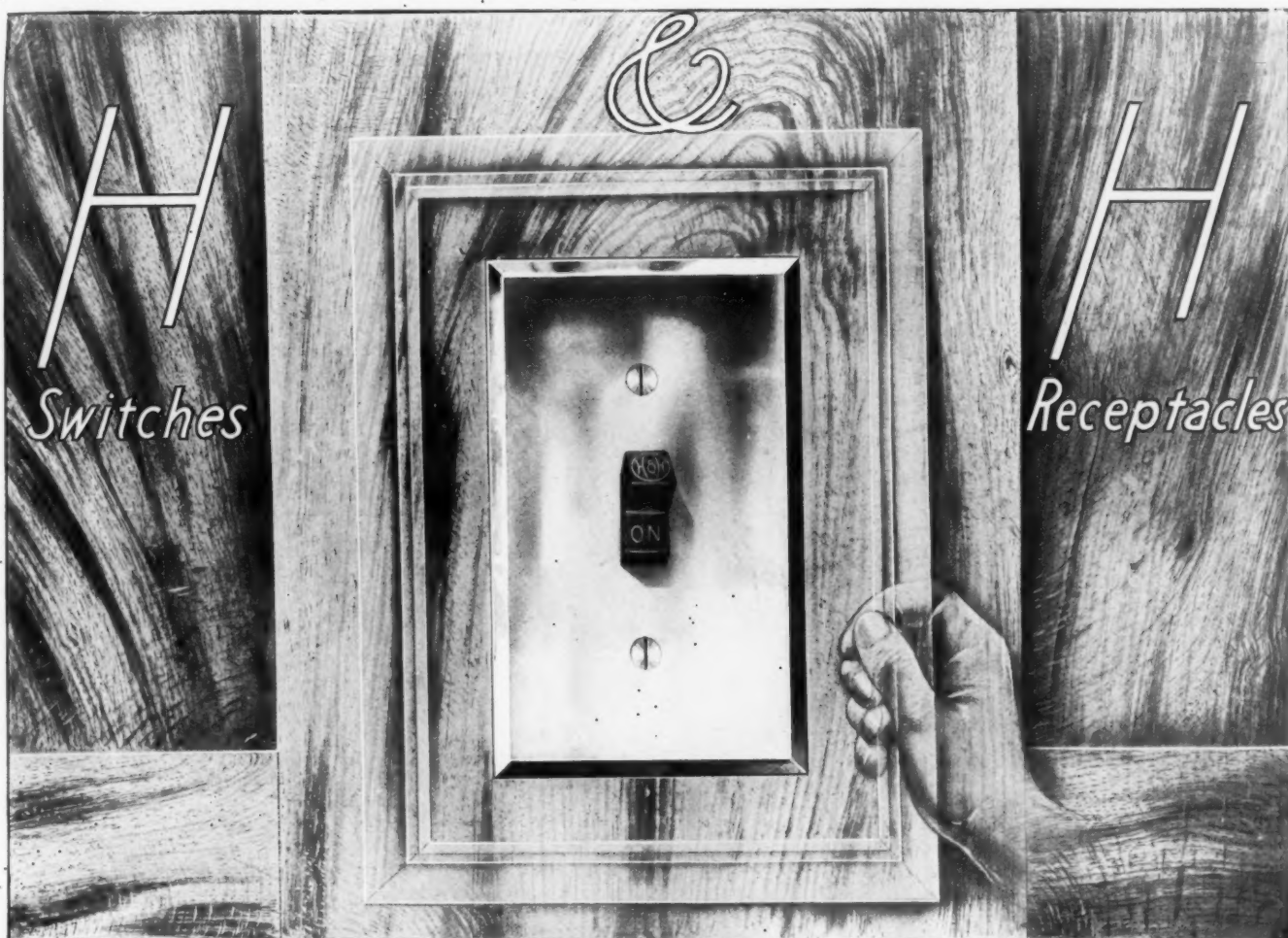
One easy turn of the Lorain Red Wheel gives the housewife a choice of any measured and controlled oven heat for any kind of oven cooking or baking.

Unless the Regulator has a RED WHEEL it is NOT a LORAIN

AMERICAN STOVE CO., 444 Chouteau Ave., St. Louis, Mo.

Largest Makers of Gas Ranges in the World.

LORAIN OVEN HEAT REGULATOR



Highlight and Hall-mark of your Electrical Work

HERE again the fact stands out that a fine switch is a focal point in the decorative scheme.

Style on the outside; Balance inside, the new Square Handle Tumbler seems a happy accessory of master designing.

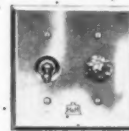
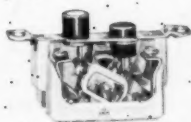
The touch confirms the impression of quality throughout, for back of the handle is the *balanced movement* of the famous "8601" (round handle) Tumbler.

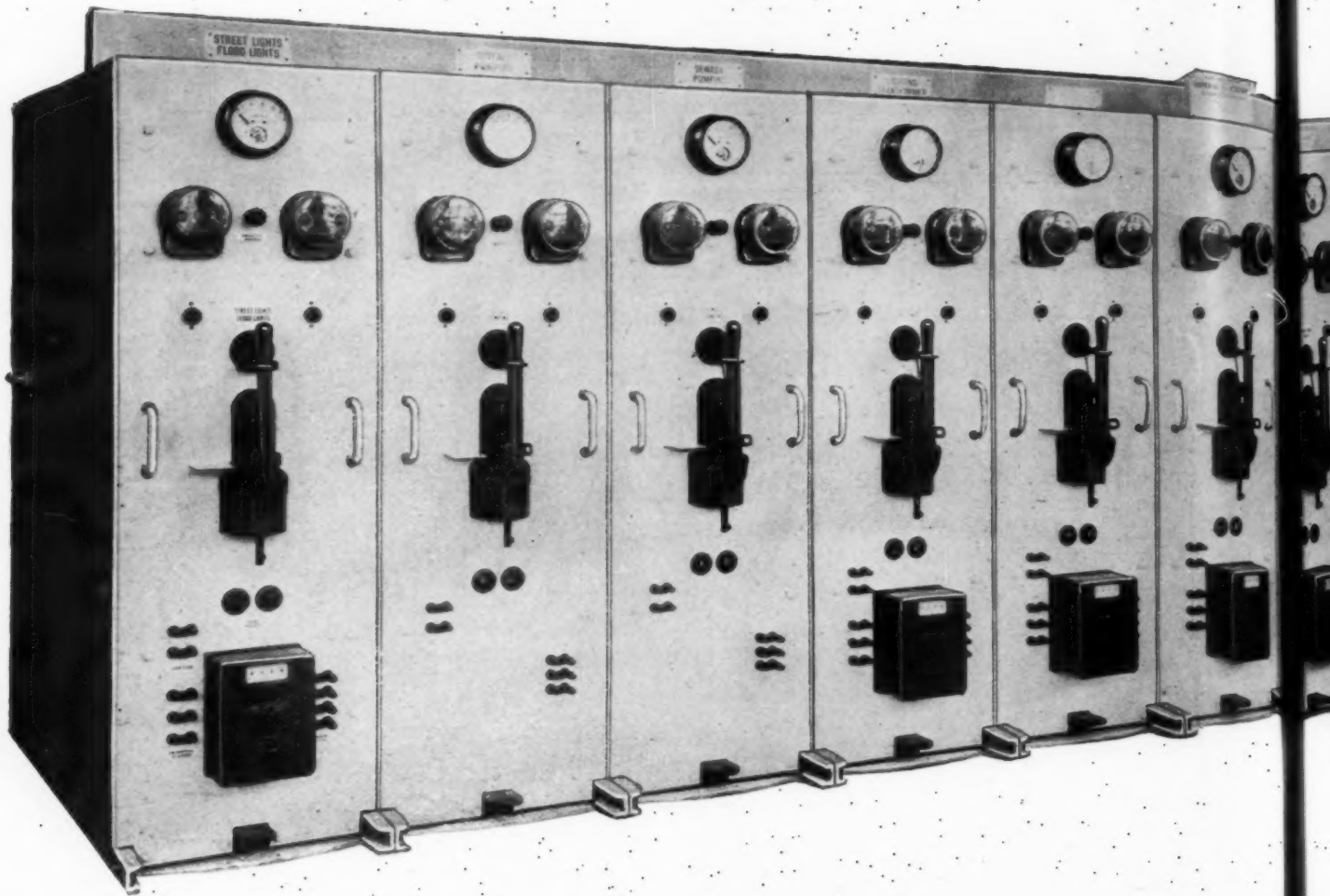
The smoothest, most quiet and pleasing action yet sensed in a tumbler, it suggests more of art than mechanics.

Of Shallow Tumblers, the most durable mechanically; the most positive electrically—and withal, competitive-priced!

In looks, *exclusive*. In cost, so "popular" that any or every job can include it. So as not to confuse with the round-handle style, specify "8601 Square."

THE HART & HEGEMAN MFG. CO. HARTFORD, CONN.





An Improved Product for a Better Service

NO interruptions in switching-apparatus service can last more than a few moments in buildings equipped with G-E Truck Type Switchboards. A spare truck panel can be rolled into place immediately—and service resumed. The panel affected is then accessible for inspection and repair without danger.

Low Cost

For equal functions, equal safety, and equal convenience of operation the overall cost of truck panels installed is less than that of other types of switchboards.

Economy

Installation, inspection, repair, and extension operations are so simplified and rendered so safe that the

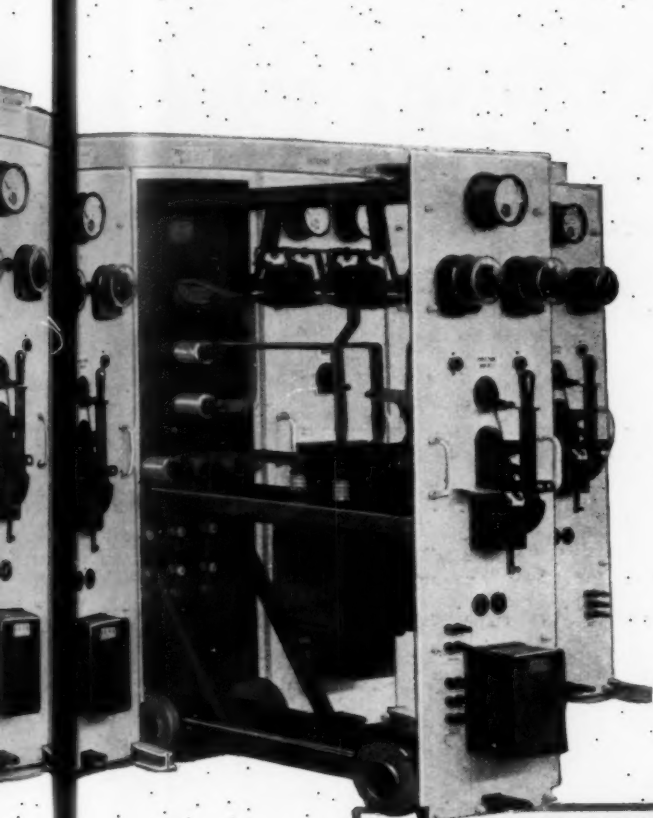
time for doing this work is reduced to the minimum. Losses from delays caused by a disabled switchboard are practically eliminated.

Safety to Operators

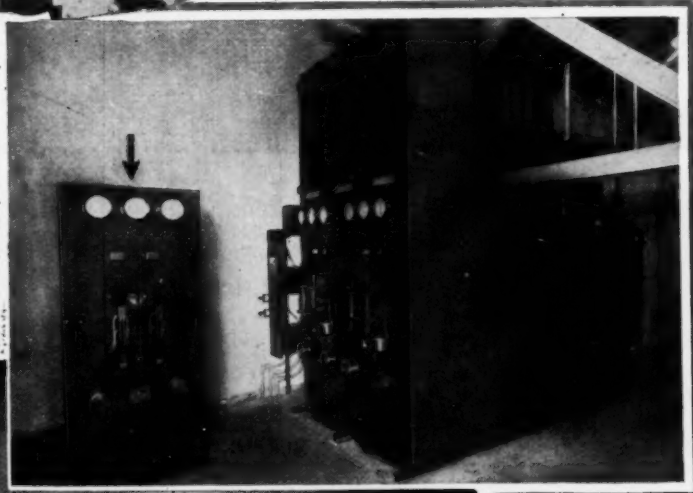
All high-voltage parts are entirely inaccessible when the truck is in its housing. When the truck panel is removed from its contacts for inspection or repair, all parts on the removable unit are electrically dead.

GENERAL

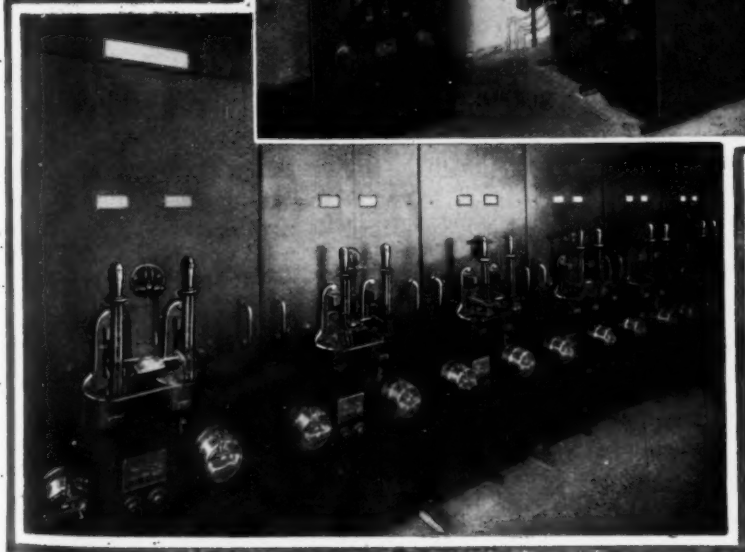
GENERAL ELECTRIC COMPANY, SCHENECTADY, NEW YORK



G-E Truck Type Switchboards in Land Title Building. Arrow denotes spare truck panel.



The Land Title Building, Philadelphia—D. H. Burnham, Architect; Harrison & Co., Engineers.



General Electric builds well, and maintains faith with its customers through consistently good service. On these two essentials—quality and service—G-E depends for continued satisfactory relations with its customers.

22B-12

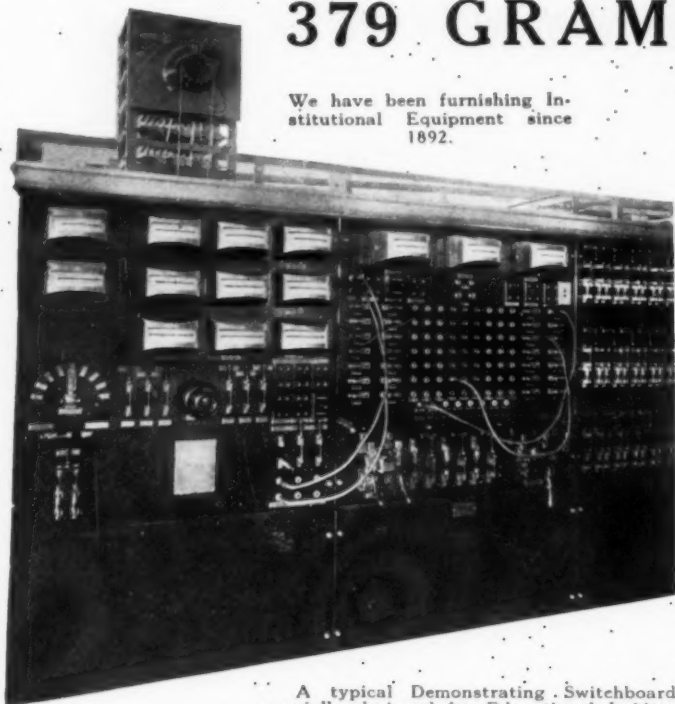
ELECTRIC

SALES OFFICES IN ALL PRINCIPAL CITIES

181 COLLEGES, "TECH", HIGH and 379 GRAMMAR SCHOOLS

have specially built

We have been furnishing Institutional Equipment since 1892.



A typical Demonstrating Switchboard specially designed for Educational Institutions. Among colleges using our equipment are Columbia; Yale, Cornell, Fordham, Union Medical (Pekin China), Barnard, Vassar, Muhlenburg, College of City of New York, Rockefeller Institute for Medical Research, Carnegie Institute, etc., etc.

TRADE **METROPOLITAN** MARK
ELECTRIC MFG. CO.

Switchboards and Panels

Our extensive engineering and estimating department available for consultation, planning and service.

METROPOLITAN
ELECTRIC MFG. CO.

BOULEVARD AND 14th ST.
LONG ISLAND CITY, NEW YORK

AUSTRAL WINDOWS



VENTILATION
WITHOUT
DRAFT

AUSTRAL WINDOW CO.
101 PARK AVE., NEW YORK CITY

HOPE'S CASEMENTS



HENRY HOPE & SONS
103 PARK AVENUE - NEW YORK

KAROLITH

*The Material of
Countless Uses*

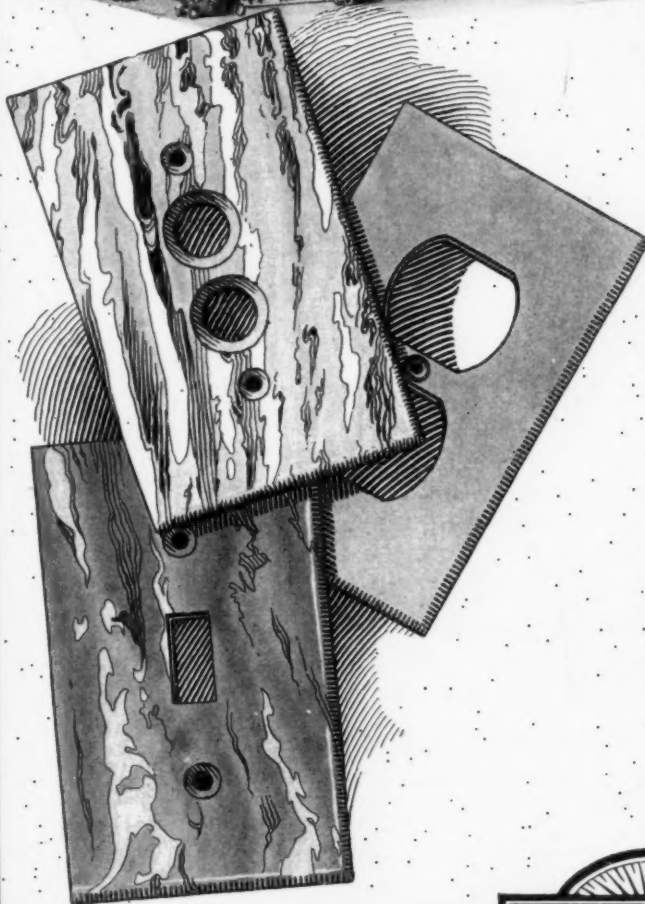


FURNITURE EXCHANGE BUILDING

Architects: - Buchman and Kahn
Associate Architect: Maximilian Zipres
Contractor: - C. Richard Davis

Electrical Contractor:
The E. J. Electric Company

Makers of Switch Plates:
METROPOLITAN ELEC. MFG. CO.
Fourteenth St. Long Island City



KAROLITH SWITCH PLATES

Specified for the new

FURNITURE EXCHANGE

Expressing the last word in modern equipment, the magnificent new Furniture Exchange utilizes the very latest and most effective in material and design.

Karolith, a raw material of unique advantages, was specified for the switch plates. Obtainable in any color, shade or mottle, permanent and unfading, a non-conductor of heat and electricity, taking and maintaining a beautiful, lustrous polish, easily worked or drilled, it offers new possibilities to architects, engineers, contractors and manufacturers of building hardware and equipment.

We shall be glad to put you in touch with the makers of a great variety of Karolith articles who can meet your present requirements or develop your ideas in Karolith. We can quote immediately on Karolith in sheets, rods and tubes in a large range of colors and combinations now in stock. Write us today.

KAROLITH CORPORATION
189-207 Thirteenth Street - Long Island City, N. Y.

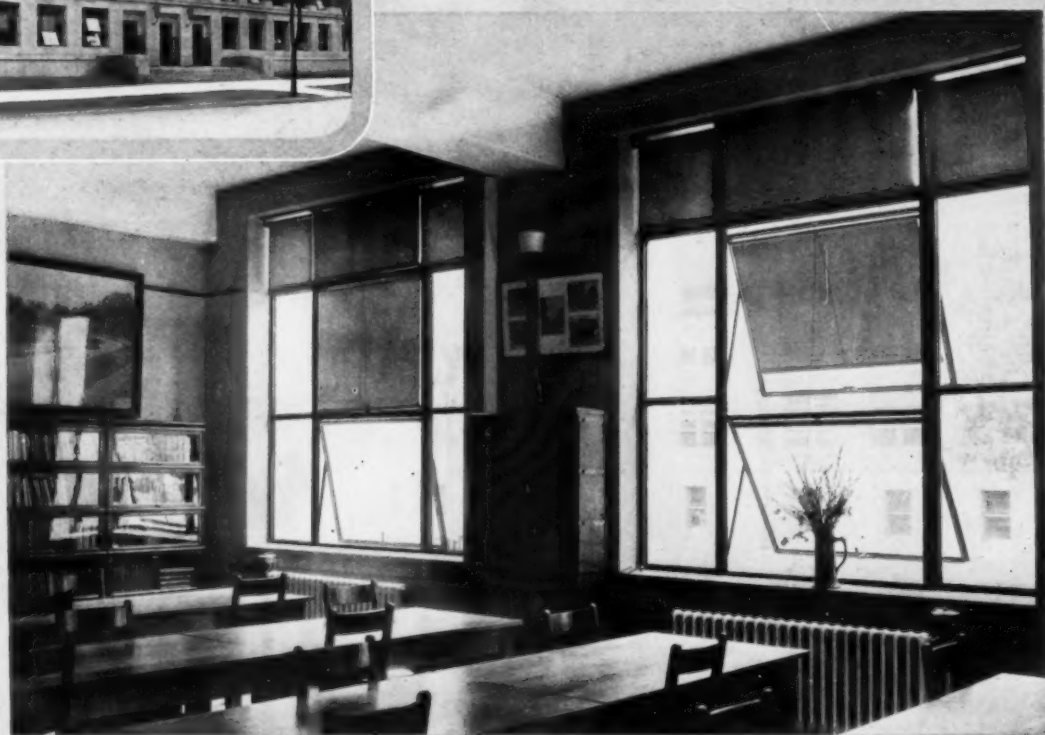
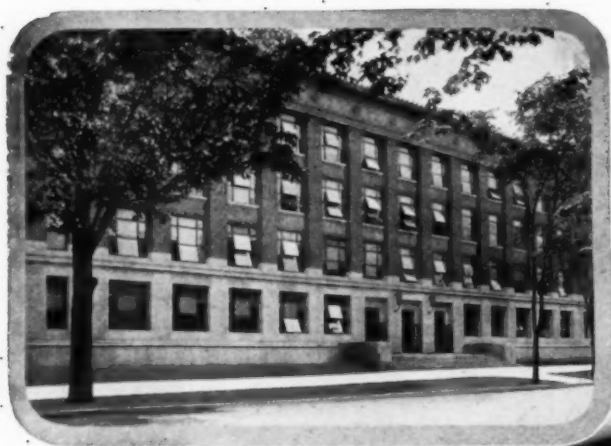
Chicago Representative:

John M. Dunn, 160 North La Salle Street

KAROLITH

TASTELESS • NON-INFLAMMABLE

ODORLESS • NON-CONDUCTING



CRITTALL *Reversible Windows*

*University of Michigan, Engineering Laboratory,
Smith, Hinchman & Grylls, Architects*

Crittall Reversible Windows possess every feature essential to the requirements of large universities, schools and office buildings.

Their narrow steel members give the maximum amount of light possible for any masonry opening. Ventilation may be varied from the slightest crevice to the entire window space (100 per cent).

Either leaf operates independently and remains rigidly in any desired position without the use of stays, weights or adjusters.

The services of our engineers are gladly placed at the disposal of architects for assistance in the solution of unusual window problems.

Catalogue 1-24 giving detailed description of Crittall Solid Steel Reversible Windows will be mailed on request.

*All Crittall Casements and Windows are made of
Crittalloy—the Copper Bearing Steel*

CRITTALL CASEMENT WINDOW COMPANY, Manufacturers
10975 HEARN AVENUE, DETROIT, MICHIGAN



[FEDERAL RESERVE BANK
Cleveland Ohio
Holtzer-Cabot Equipped]



A Confidential Booklet

For obvious reasons a booklet of this nature cannot be spread broadcast. It deals with the very latest thought on bank alarm systems and general signaling systems.

Architects and consulting engineers are invited to write for it. It is highly informative, profusely illustrated, and written in a clear interesting manner.

It will be sent gratis to any reliable individual in the above fields.

Write TODAY.

1875 — 1925

This year marks the fiftieth anniversary of the founding of this concern.

"Fifty years for stability."

The architect's part in stemming the crime wave!!

At no time in history have banks had so great a need for reliable alarm systems. Current dailies give constant proof of the guerrilla warfare that bandits are waging on financial institutions.

Here enters the architect's profitable duty.

On all new bank construction do not fail to recommend the installation of a reliable bank alarm system—the Holtzer-Cabot. Call upon your older clients in the financial field and explain the benefits and security that a Holtzer-Cabot Bank Alarm System would allow.

It is an utter necessity. The story is being told through advertising in the bankers' journals.

You as architectural counsel will be repaid in many ways—in prestige, in a financial sense, and in a professional manner.

And you cannot possibly recommend a more reliable product of a more reliable firm.

The HOLTZER-CABOT ELECTRIC CO.

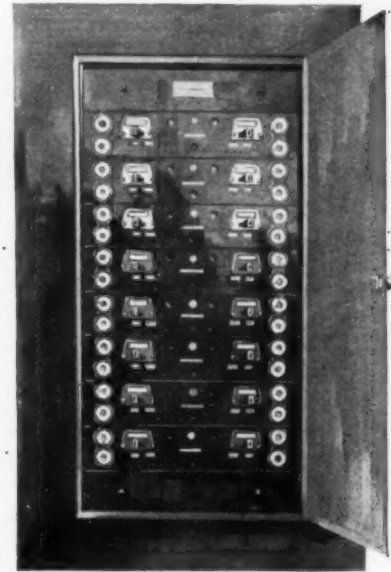
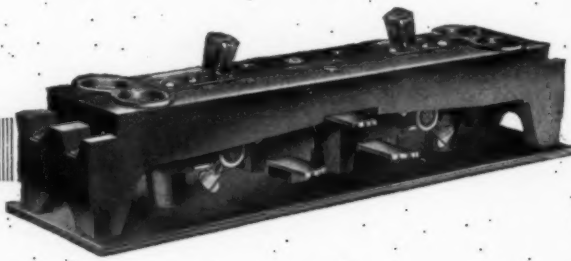
Home office and factory
125 Amory Street
Boston, Mass.

Chicago office
6161-65 South State St.
Chicago, Ill.

SYSTEMS.
NURSES' CALL
DOCTORS' CALL
IN AND OUT
WATCHMEN
TELEPHONE
FIRE ALARM
BANK
PROTECTION

Holtzer-Cabot

FOR
HOSPITALS
HOTELS
BANKS
SCHOOLS
COLLEGES
OFFICE
BUILDINGS
FACTORIES



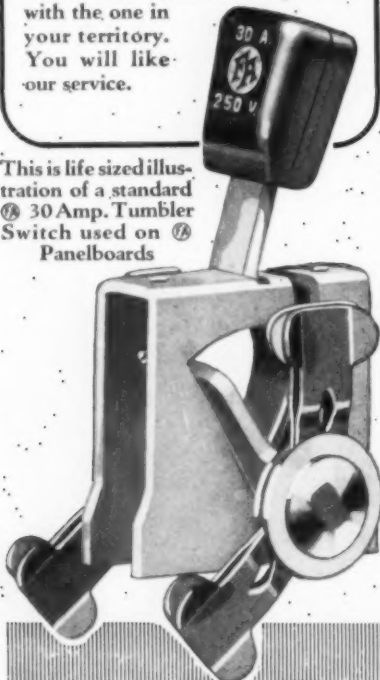
“That Extra Strength means a better job!”

FA District Offices that
are ever ready to
serve you

Atlanta	Detroit	Philadelphia
Baltimore	Kansas City	Pittsburgh
Boston	Los Angeles	Portland
Chicago	Minneapolis	Seattle
Cincinnati	New Orleans	San Francisco
Dallas	New York	Winnipeg
Denver		London, Ont.

Estimates, data and helpful co-
operation are furnished by each
FA District office. Each is a com-
plete unit organized to be of service
to the Architect. Become acquainted
with the one in
your territory.
You will like
our service.

This is life sized illus-
tration of a standard
FA 30 Amp. Tumbler
Switch used on FA
Panelboards



Along with the architect, we
value his opinion highly. He
is the chap who runs the con-
duit, pulls the wire, and
makes the connections. And
he knows honest to goodness
panelboard workmanship
when he sees it.

Why shouldn't he?

He has installed every kind
of panelboard capable of be-
ing specified—good, bad and
“indifferent.” And if he is the
kind who takes pride in his
work, you'll see him
eye an FA Panelboard
in the same pleased
manner a Kentucky
horseman inspects a
Derby winner.

He knows FA Panelboards
are more than a mere place
in which to keep fuse plugs.

His recognition of skilled
craftsmanship is instantan-
eous. He senses the service
and durability that have won
for FA the undisputed title,
“the sign of a better job.”

And that is what he calls all
panelboards which carry the
FA pride mark.

Compare FA Panelboards
with any other brand made.

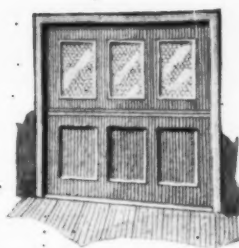
And then compare
the price. FA Panel-
boards are not only
a far better job, but
the cost is actually
less.

May we send you a
practical hand book on
Panelboards—the FA
Catalog? It contains a
wealth of valuable in-
formation not to be
found elsewhere. No
cost, no obligations—
just your name, please.

Frank Adam

ELECTRIC COMPANY
ST. LOUIS

Three prime questions that should be asked about Freight Elevator Doors-



*Peelle Kalamein
Panelled Door,
three lights of
glass in upper
half.*

DOES it answer the purpose?" "Is the price right?" "Just how long and how well will it serve?" These are the three important questions that should be asked about freight elevator doors. Just how satisfactorily Peelle answers, is evidenced by the great number of industrial buildings throughout America that are equipped with Peelle Freight Elevator Doors.

The PEELLE Company, Brooklyn, N.Y.
Boston • Chicago • Cleveland • Philadelphia
and 30 other cities

PEELLE
COUNTERBALANCED - TRUCKABLE
**Freight
ELEVATOR DOORS**



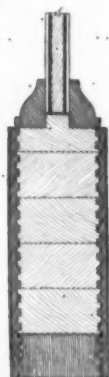
The Peelle Catalog, containing complete details, will be gladly sent on request.



HARKNESS MEMORIAL QUADRANGLE—YALE UNIVERSITY—JAMES GAMBLE ROGERS, Architect

College Doors Richly Designed— Built to Endure

The predominance of Compound Veneered Doors among America's universities and colleges testifies to the sturdiness of their construction and the experienced skill of the Compound organization in realizing the specifications of renowned architects.



SUPER DURABILITY

1. Five-ply panel.
2. Core $\frac{1}{2}$ " soft wood, laminated.
3. Sawed stile and rail veneers are $\frac{1}{8}$ " in thickness. The tongue-and-groove construction of the veneers affords fully twice the gluing surface of the ordinary flat veneer. Hence the rigid, durable, compound construction.

Our experience with college doors and college boys dates back many years. At one well-known school late home-comers removed door moldings, knocked out panels, and entered the dormitory in the small hours. Upon being consulted we advised the use of another type of construction, where panels cannot be removed except by actually breaking in the door.

Among the hundreds of universities, colleges, and other educational institutions where doors of our manufacture are now in intensive service are these:

YALE UNIVERSITY,
Harkness Memorial Quadrangle
HARVARD UNIVERSITY,
Widener Library, Lehman Hall
CORNELL UNIVERSITY, Barnard Hall
COLUMBIA UNIVERSITY,
Women's Residence Hall
WILLIAMS COLLEGE, Dormitories
OHIO STATE UNIVERSITY,
Engineering Building, Educational Building,
Animal Husbandry Building
UNIVERSITY OF MICHIGAN,
Literary Building, Physical Science Building,
Waterman Gymnasium
VANDERBILT UNIVERSITY, Hospital Group

UNIVERSITY OF ILLINOIS,
West Residence Hall, Men's Gymnasium,
Library
DETROIT UNIVERSITY, Dormitory
SACRED HEART SEMINARY, Detroit
BOSTON COLLEGE, Science Building
IOWA STATE UNIVERSITY, Library
EXETER ACADEMY, Exeter, Mass.
EVANSTON HIGH SCHOOL, Evanston, Ill.
OMAHA TECHNICAL HIGH SCHOOL,
Omaha, Neb.
ROOSEVELT HIGH SCHOOL,
Des Moines, Iowa
LINCOLN HIGH SCHOOL, Cleveland, Ohio
TECHNICAL HIGH SCHOOL, Toronto, Can.

To be sure that the doors on your next structure are what you expect them to be, let us make them to order. Write for estimates on any design and quantity.

THE COMPOUND AND PYRONO DOOR CO.
ST. JOSEPH, MICHIGAN

Compound
VENEERED DOORS

MADE BY AMERICA'S OLDEST VENEER DOOR SPECIALISTS

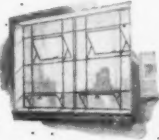


LUPTON

STEEL WINDOWS EVERYWHERE

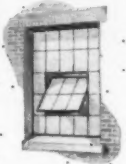
Other types of Lupton Windows

Projected Sash



First made by Lupton; this type of sash has met with constantly increasing popularity for factories, office buildings and schools. Easily operated ventilators stay open in any position. Made in Architectural and Industrial styles.

Pivoted Sash



The standard and accepted steel window for factories, stores, garages, warehouses and all sorts of business buildings. Rigidly built of solid copper-steel rolled sections. Made in 25 stock sizes for immediate shipment.

Heavy Casements



The highest grade steel windows for banks, libraries, clubs, office buildings or fine residences. They are made in six standard types and can be furnished to suit any size or shape of opening.

Counterbalanced



These windows make balanced ventilation automatic. When the lower sash is opened, the upper sash lowers an equal distance, thus providing an entrance for fresh air and an exit for exhausted air at the same time.

Residence Casements

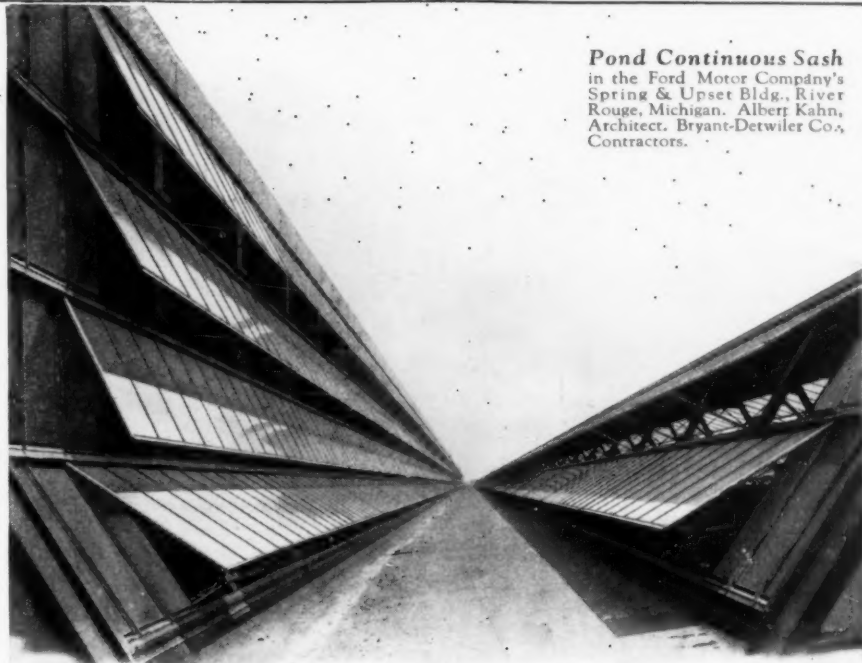


Lupton residence casements embody a charm of line and a practicality of detail found in no other makes. Rigid, weathertight, and easy to install. Made in a variety of standard sizes to suit all requirements.

Basement



Lupton basement windows have transformed the lower part of the house to a bright, airy place. They give practically double the light of old-fashioned wood windows and never stick, rattle or warp. Made in four standard sizes.



Pond Continuous Sash in the Ford Motor Company's Spring & Upset Bldg., River Rouge, Michigan. Albert Kahn, Architect. Bryant-Detwiler Co., Contractors.

Pond Continuous Sash

POND Continuous Sash makes practical the use of extremely wide and long structures which heretofore have been impractical because it was not feasible to daylight and ventilate them properly. Through the combined weather protection and mass control it affords, it permits industrial buildings to be made larger and, at the same time, when properly designed, more hygienic and pleasant to work in.

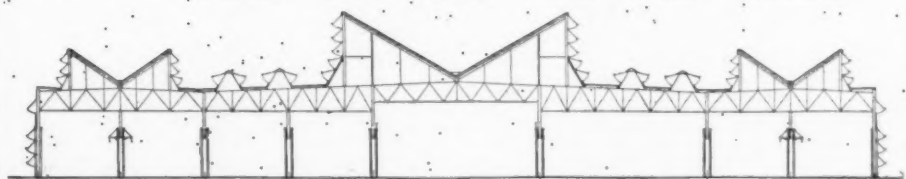
Originally designed for use in roofs, Pond Continuous Sash is equally useful in side walls. It is particularly effective in connection with Pond Roof Design and Pond A-Frames.

Detailed information will be promptly furnished on request. Ask any branch office.

DAVID LUPTON'S SONS COMPANY

2207 E. Allegheny Avenue, Philadelphia, Pa.

Atlanta Boston Chicago Dallas Los Angeles New York
Baltimore Buffalo Cleveland Detroit Newark Pittsburgh



Cross section of Fairbanks-Morse plant, Beloit, Wis. C. A. Hardy, Engineer. This shows clearly the use of Pond Continuous Sash in connection with Pond Trusses and Pond A-Frames.

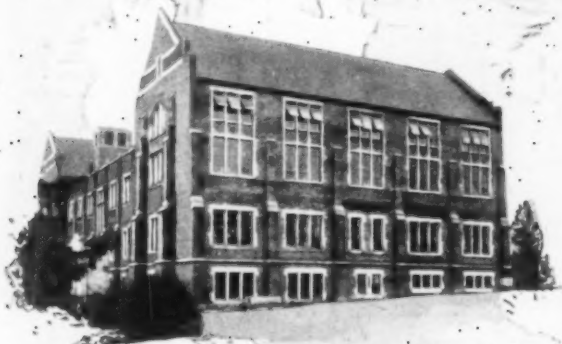
ARCHITECTURAL *for Schools*



Tucson High School
Tucson, Arizona
Architects—Lyman & Place



J. M. Atherton High School
for Girls
Louisville, Ky.
Architects—Joseph & Joseph



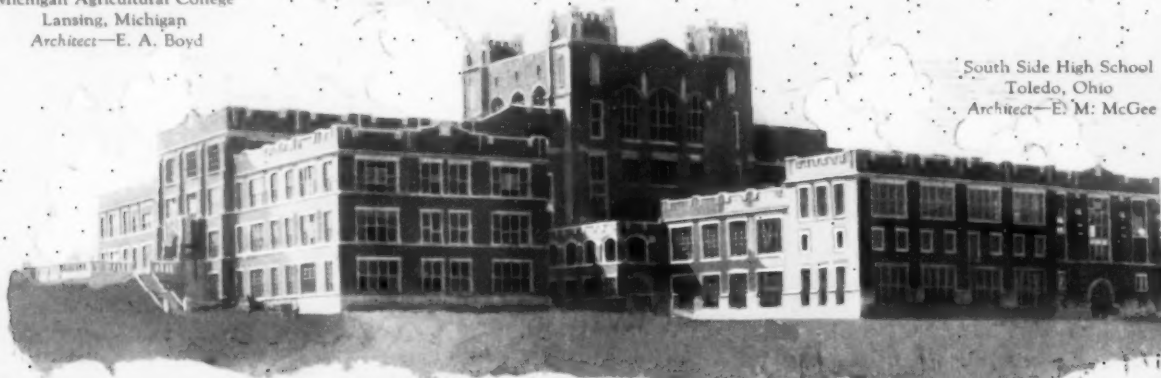
Michigan Agricultural College
Lansing, Michigan
Architect—E. A. Boyd

THAT leading architects recognize the advantages of Fenestra Reversible Windows, is shown by the hundreds of up-to-date schools in which these windows have been specified. A few of these modern school structures are illustrated here.

The various types of Fenestra Windows conform readily to the architectural and structural demands of the designer and builder.

"Reversible" windows, with ventilators hung at the top or bottom, open out or in;—"Counterbalanced" windows slide vertically and open equally at top and bottom;—"Casement" windows, which are hinged at the side, swing out;—all of these designs have been used in school buildings with pleasing architectural results.

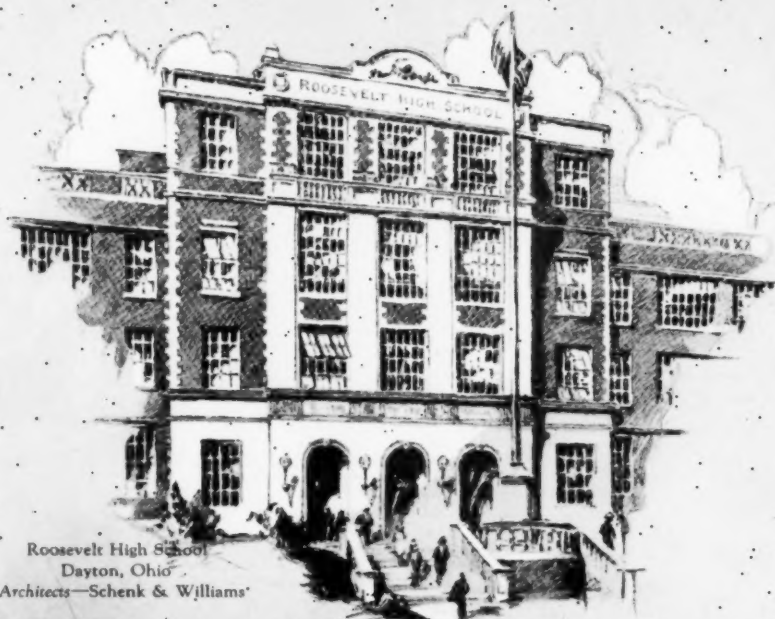
All of these provide more light, better ventilation, and greater fire protection than the ordinary wood window. All are easy to operate; convenient to shade; accessible for washing from the inside. All have small glass lights economically replaced when broken.



South Side High School
Toledo, Ohio
Architect—E. M. McGee

FENESTRA

and Universities



Roosevelt High School
Dayton, Ohio
Architects—Schenk & Williams

And of equal importance is the localized service which is an exclusive characteristic of the Fenestra organization. Carefully designed window layouts, accurate detailing, prompt shipment and satisfactory erection by the Fenestra Construction Co., are all part of the responsibility assumed by our local offices and carried through without reference to the Factory at Detroit. This localized service is immediately available wherever construction work is contemplated.

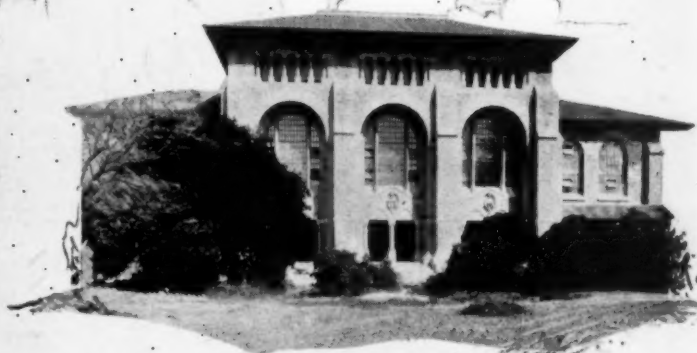
At the other end of your telephone is a Fenestra sales engineer, waiting to answer your call. He is backed by a fully stocked warehouse and a staff of experts especially trained in window designing and service.

DETROIT STEEL PRODUCTS COMPANY
East Grand Blvd., Detroit, Michigan

Factories in Detroit, Mich., Oakland, Calif., and Toronto, Canada
For Canada: Canadian Metal Window & Steel Products, Ltd.
160 River Street, Toronto, Ont.



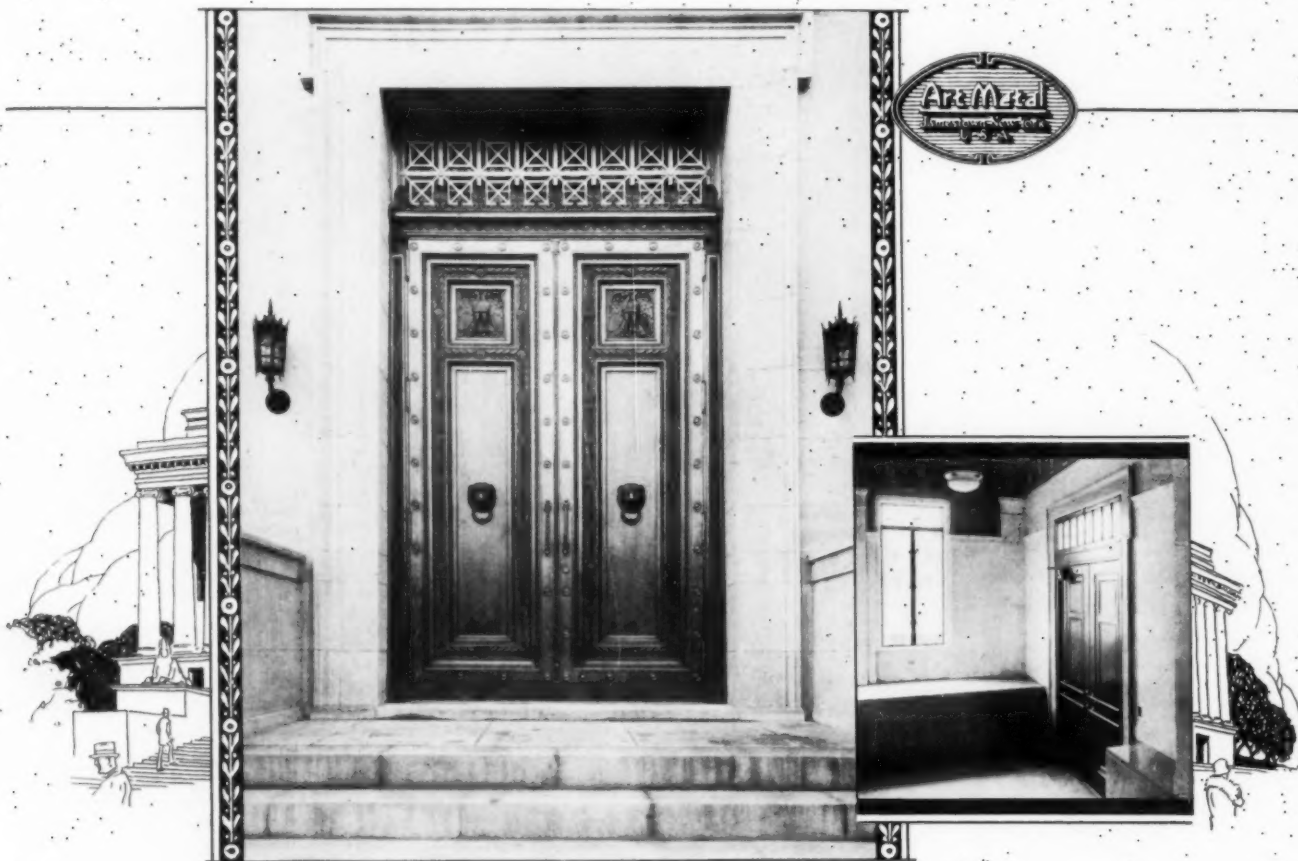
South Side High School
Rockville Center, Long Island
Architect—Huse T. Blanchard



Leland Stanford Junior
University Library
Palo Alto, California
Architects—Bakewell & Browne

Fenestra

for schools and institutions
homes and apartments
commercial buildings
all industrial structures



Bronze Entrance Doors by ART METAL
in the Scottish Rite Cathedral, San Antonio,
Texas. Ralph H. Cameron, Architect.

Hollow Metal Doors by ART METAL

Here, in these stately entrance doors of the beautiful Scottish Rite Cathedral, San Antonio, Texas, is demonstrated anew the ability of ART METAL Engineers and Craftsmen to co-ordinate with the Architect.

They bear striking witness to the perfection of detail and the successful execution of ideas characteristic of every ART METAL installation.

ART METAL is glad to put at the disposal of Architects and Builders the complete facilities of their exceptional Engineering Department in working out problems of every kind in hollow metal work.

Let us consult with you on your next project requiring a Hollow Metal installation.

Ready Now!

The new 160-page, Art Metal Catalog "Hollow Metal Doors and Trim" will be sent to executives in offices of architects and contractors when requested on their letterhead.

Art Metal
Construction Co.
Jamestown
N. Y.

Art Metal

JAMESTOWN, NEW YORK

Branch Offices: New York, Chicago, Boston, Cleveland, Buffalo, Pittsburgh, Detroit, St. Louis, Kansas City, Birmingham, Seattle, Hartford, Albany, Portland, Me., Cincinnati, Washington, D. C., Baltimore, Dallas, Minneapolis, Philadelphia, Indianapolis

Chamberlin Strip in Use 22 Years Prevents 93.38% In-leakage of Air

Horace Mann School
New York City
Equipped in 1903 with Chamberlin Metal Weather Strips.



Time Test Gives True Measure of Weather Strip Value

How Chamberlin Tests are Made

Chamberlin installation tests are made by placing an air collection chamber over the entire inside of a window. Opposite doors and windows are opened to aggravate circulation. The in-leakage past the strip is measured with an anemometer. Windows are not specially prepared for test and are always on the windward side of a building. In-leakage always includes leakages through the frame and pulley holes.

Tests made April 11, 1925, of Chamberlin Weather Strips installed twenty-two years ago on the Horace Mann School, New York City again reveal the lifetime efficiency of Chamberlin design and installation.

Actual leakage through windows with 20.67 lineal feet of crack, was only 1.87 cu. feet per minute. 93.38% of possible in-leakage of air was effectually prevented by the Chamberlin strip.

Although a pioneer in the development of the tongue and groove design and of the corrugated strip, Chamberlin has always regarded *installation* as a factor equally important as design.

Because only Chamberlin experts perfectly trained to their work, are allowed to fit and install Chamberlin Weather Strip, we are able to guarantee every installation for the life of the building.



We invite architects and builders to make use of our nation-wide sales and service organization

New Catalog Just Out—Send For It

This book of details and specifications has been pronounced the most complete of its kind ever issued. Mail coupon for copy.

CHAMBERLIN
METAL WEATHER STRIP CO., INC.
Detroit, Michigan

80 Sales and Service Branches Throughout the United States

Chamberlin Metal Weather Strip Co.
Detroit, Michigan

Please send free copy of your new Detail Book. Also copy of illustrated booklet to show my clients.

Name _____

Address _____

City _____

State _____

AF-12



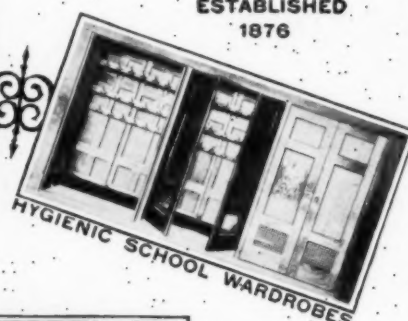
Wilson



SECTIONFOLD PARTITIONS



ROLLING STEEL DOORS



HYGIENIC SCHOOL WARDROBES



VENETIAN & AWNING BLINDS



ROLLING PARTITIONS

AIRKORE FIRE DOORS

SEND FOR DESCRIPTIVE CATALOG 3

THE J. G. WILSON CORPORATION, 11 E. 38TH ST., N. Y. C.

PROVINCIAL HOUSES IN SPAIN

By Arthur Byne & Mildred Stapley

ARCHITECTS value Spanish types of domestic architecture because of their simplicity of design and plan and also because they are easily developed in materials inexpensive and easily had. Spain offers a choice of several kinds of residence architecture, types sufficiently different from one another to afford considerable range of selection, yet all possessing the same strength and virility, the excellent lines, the same graceful but unaffected grouping, and the discriminating use of detail which renders distinguished so many Spanish domestic buildings.

Houses in various parts of the Spanish peninsula, particularly the buildings of medium size in rural districts or provincial towns, offer excellent precedent for use in different parts of America where climate conditions are about what prevail in the provinces of Spain.



IN this volume two well known writers on Spanish architecture and decoration review the various forms which are given to the small or medium sized house in Spain. To render the work as helpful as possible to architects, the authors have included many plans and drawings of different kinds, details of such exterior parts of buildings as friezes, cornices, windows, timber overhangs, soffits and balconies, or of such interior parts of the structure as ceilings, fireplaces, doors and stairways. Part of the work deals with the tiles, pottery, ironwork, plaster in relief and the other forms of craftsmanship which contribute so much to the excellence of domestic architecture in Spain. It is a work likely to be invaluable to the designer.

The book contains text and 190 plates 12 1/2 x 16 inches, and is bound in cloth. Price \$25, postpaid.

ROGERS & MANSON COMPANY, 383 Madison Avenue, New York

Aerial View of the University of Notre Dame, Notre Dame, Ind. Founded 1843. Present enrollment more than 2100 students. This large group of buildings is heated thruout by a Webster Vacuum System of Steam Heating from a central heating plant.



"—dated June 27th, 1899"

THERE is a wide difference between sales and service—a wide difference between promise and performance Witness: the Webster Vacuum System installation at the University of Notre Dame.

The first proposal for a Webster Vacuum System was dated June 27th, 1899. The first Webster installation was completed in 1900 and contained 16,913 square feet of radiation And then—twenty five years of Webster Service As additions and changes were made the Webster Vacuum System kept pace with the growth of the institution. New developments in the art of heating were promptly incorporated as the system was extended to all the new buildings. Today this 25-year-old Webster Vacuum System of Steam Heating is thoroughly up to date and contains 99,080 square feet of radiation.

We would like to give you the inside facts on Webster Service We would like to tell you how Webster Service is working with architects, engineers and heating contractors—getting on the job at an early stage in the planning and never quitting during the life of the installation.

It pays to concentrate on selling and installing WEBSTER SYSTEMS of STEAM HEATING in small towns as well as big cities. One contractor* has installed 82 Webster Systems—52 of them in his home town of less than 5000 population. He had no competition on most of them. Are you overlooking this opportunity? Ask us about it.

*Name on request.

Warren Webster & Company

Pioneers of the Vacuum System of Steam Heating
Camden, N. J.

50 Branch Offices

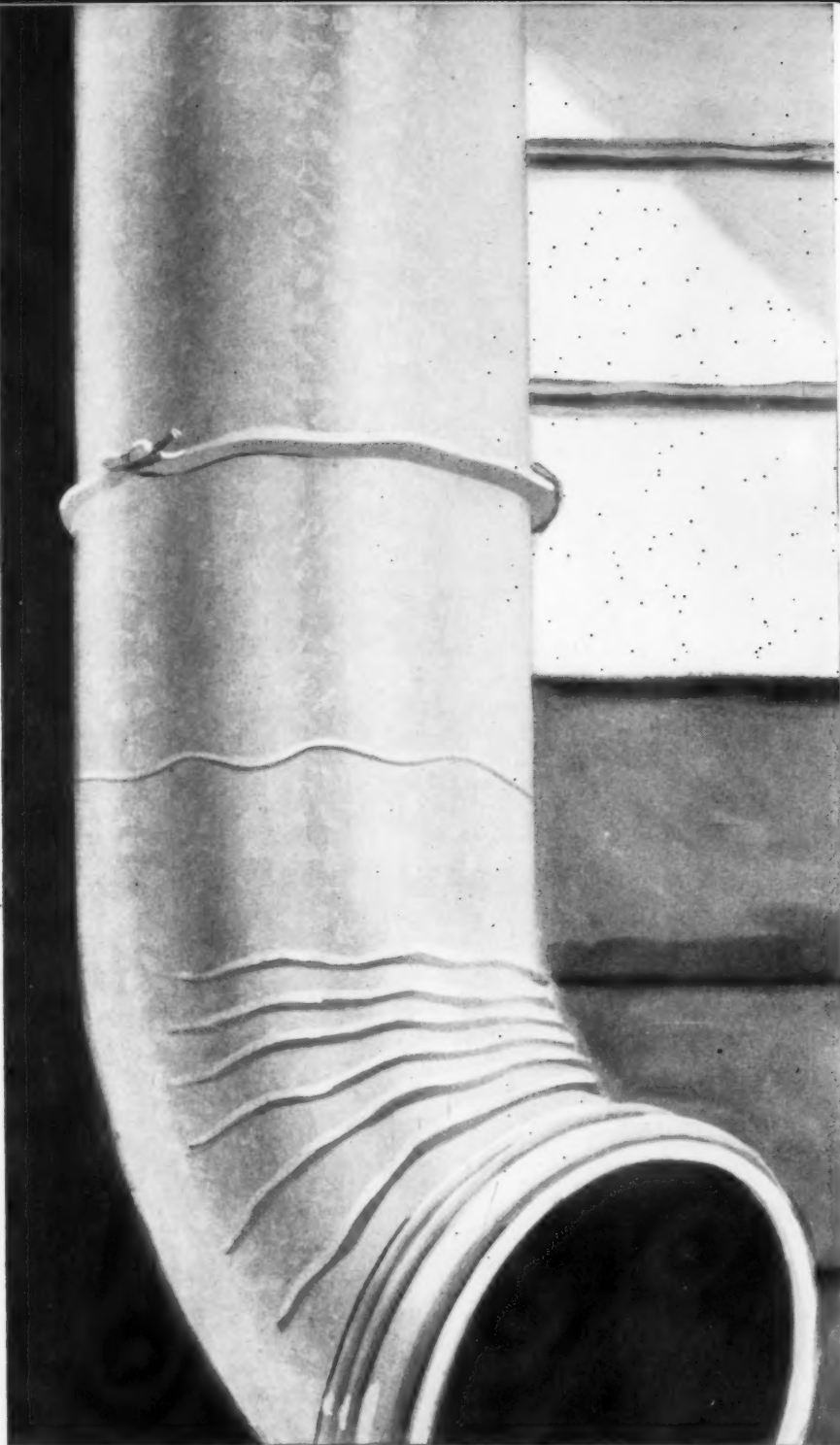
In Canada, Darling Bros., Ltd., Montreal

—since 1888

Webster

Systems
of Steam Heating

More than 34,000 installations in America's finer buildings



1 The base is Ohio Metal (copper bearing steel) highly rust resistant and providing maximum strength and rigidity.

2 The base is Terne coated (combination of lead and tin) dispensing with acid pickling which might leave some traces of acid in the seam.

3 AFTER forming the pipe is dipped by hand in pure zinc, giving a complete protection both inside and outside to surfaces, edges and seams, and the heaviest zinc coating possible to obtain.

"Inasmuch as it is the policy of the Wheeling Corrugating Company to provide its customers with maximum value, the manufacture and stock of Conductor Pipe made of 29 gauge and lighter material has been discontinued. For best service, Conductor Pipe made of 28 gauge and heavier Galvanized Sheets is recommended."

Wheeling

Surfaces — Edges — Seams Protected from Rust by Zinc-Coating After Forming

An outer shell of pure zinc—a perfect shell of rust protection united with the base metal—gives Wheeling Hand Dipped Conductor Pipe enduring resistance to the elements and insures longer life. The full value of this protection is obtained by the Wheeling process of zinc-coating AFTER forming. Surfaces and edges are completely covered. Seams are permanently sealed.

Combined with this in Wheeling Hand Dipped Pipe is the rigid strength of copper bearing Ohio Metal, which constitutes the base structure. Damage by crushing, denting and other disfigurement is scarcely possible.

In developing this unusually serviceable conductor pipe Wheeling engineers took advantage of three fundamental factors in prolonging conductor life—copper-bearing steel, terne coating and hand dipping the completed product in pure zinc.

Specify Wheeling Dipped Conductor Pipe to insure a perfect job for any climate. Write for a sample—examine it—see for yourself that it is made to give you the most economical service you can buy.

WHEELING CORRUGATING COMPANY
WHEELING, W. VA.

New York
Chicago

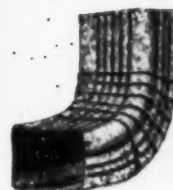
Philadelphia
St. Louis

Kansas City
Chattanooga

Richmond
Minneapolis

Wheeling Heavy Extra Coated Eaves-trough

To provide complete equipment for all construction Wheeling Extra Coated Eaves-trough, made of Ohio Metal, is provided in both lap and slip joint styles. This is recommended for use with Wheeling Hand Dipped Conductor Pipe.



One piece Corrugated Conductor Pipe
Elbows and shoes



Hinged hooks plain
or corrugated for
brick or wood



Round hooks wired



Galvanized Steel
Wire Eaves-trough
Hangers

HAND DIPPED Conductor Pipe

and Wheeling Building Materials



for
 roofs, gutters,
 flashings, splash
 boards, drain
 boards, laundry
 equipment, food
 service equipment,
 clinical fittings.

Specify

Monel Metal

for operating economy

You will be surprised at the number of places in a building where Monel Metal will prove to be "just the thing." We suggest that you talk over some of the principal uses for Monel Metal with your sheet metal worker.

To the architect, Monel Metal represents an opportunity—an opportunity to insure for his clients, long wear and low up-keep for those parts of a building which wear and which the elements ultimately destroy.

For parts of buildings exposed to the weather, Monel Metal is particularly desirable. It will not rust, and the corrosive attacks of dampness and atmosphere leave it unharmed. Yet it is so strong and tough that it lasts indefinitely under stress and strain. It is available in commercial forms. The sheet metal worker can supply it.

For food service equipment, Monel

Metal is now generally accepted as standard. It is easily kept clean with a little soap and water; it will not rust and resists corrosion. It is so tough that it withstands indefinitely the severe treatment such equipment must receive. These same qualities make it invaluable for operating, bedside and instrument tables in hospitals. For laundry equipment, it is the ideal metal.

To make your files complete, you should have all the facts about Monel Metal.

For special information our technical staff is at your service.

Write to-day for all the facts.

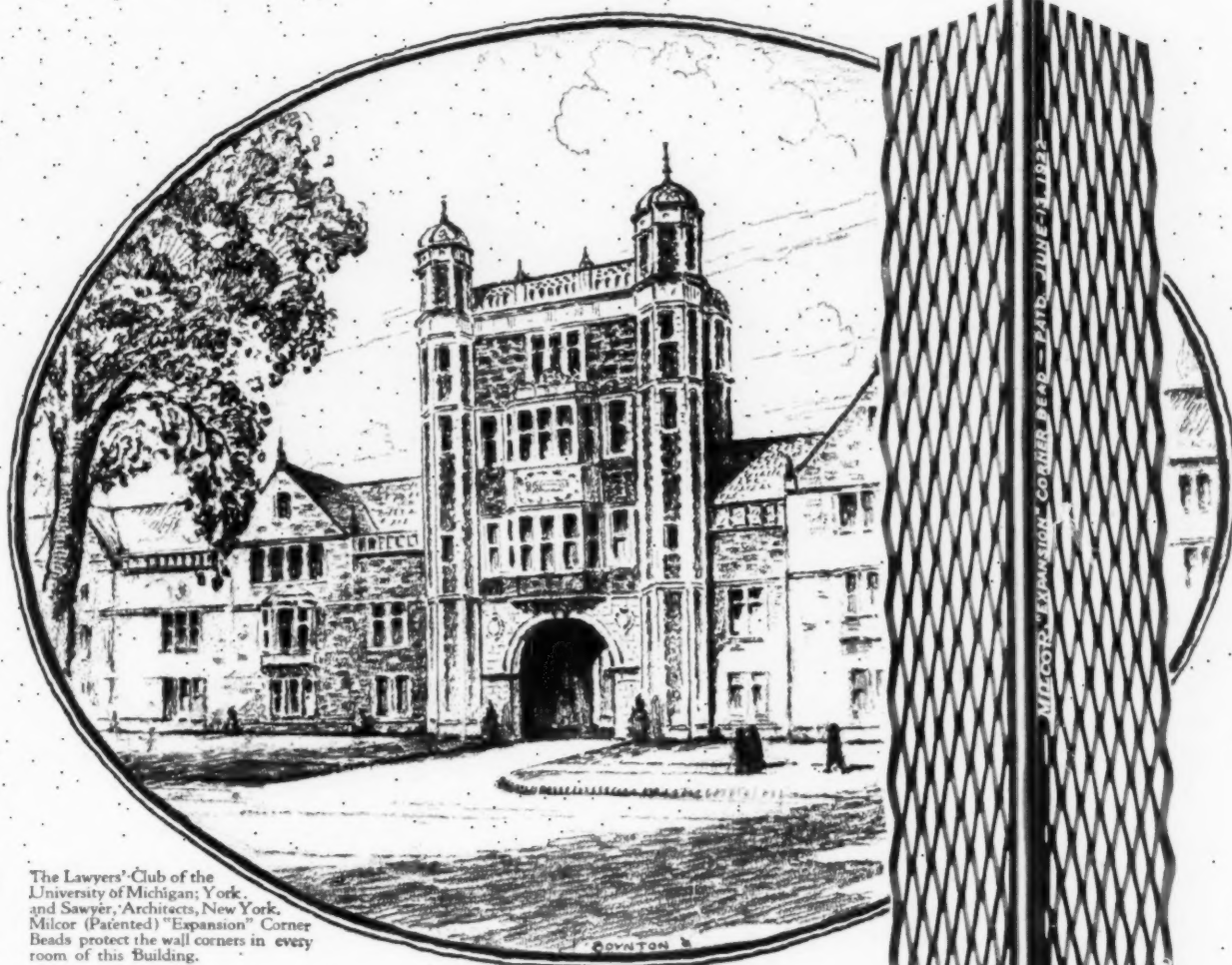
ASK FOR "LIST B" OF MONEL METAL & NICKEL LITERATURE

INCo
Monel

THE INTERNATIONAL NICKEL COMPANY
 67 WALL STREET NEW YORK CITY

Monel Metal is a technically controlled Nickel-Copper alloy of high nickel content. It is mined, smelted, refined, rolled and marketed solely by the International Nickel Company. The name "Monel Metal" is a registered trade mark.

metal



The Lawyers' Club of the University of Michigan; York and Sawyer, Architects, New York. Milcor (Patented) "Expansion" Corner Beads protect the wall corners in every room of this Building.

Give Your Clients Better Wall Corners Without Added Cost

YOU save more for your client than the slight additional cost of Milcor "Expansion" Corner Bead when you specify this unique corner bead, because you thus eliminate the expense of high priced mechanics' drilling and plugging concrete columns, or other heavy erection costs which mount up when installing ordinary types of corner beads.

Plasterers can set and plumb "Expansion" Corner Bead with about one-third the cost of labor required for erecting old style beads.

And the patented expanded metal wings of Expansion Corner Beads reinforce the inner and outer corners of the room, making them the strongest parts of the wall instead of the weakest.

MILWAUKEE CORRUGATING COMPANY
MILWAUKEE, WISCONSIN
Chicago, Ill., Kansas City, Mo., LaCrosse, Wis.

MILCOR

EXPANDED METAL PRODUCTS

"Backbone of Better Plastering"



Send for Free Samples!

We shall be pleased to send you complimentary samples of this patented Milcor "Expansion" Corner Bead and specification data for your files, if you will send back the convenient Coupon or have your secretary drop a line to us.

Milwaukee Corrugating Co.,
Milwaukee, Wis.

Gentlemen:

Without obligation, please send me free samples of "Expansion" Corner Bead, and specification data for our files.

Name

Address

City & State

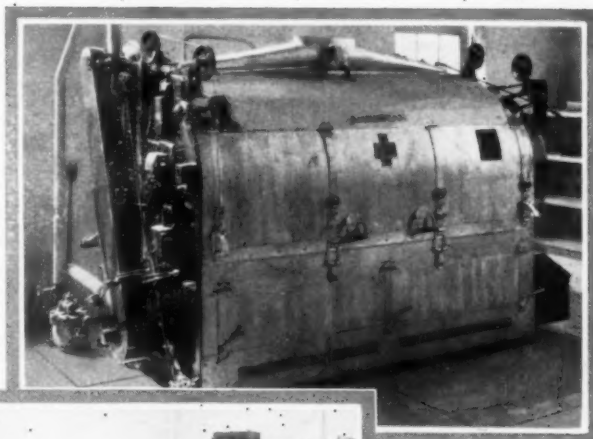
No. 15 of a series of advertisements featuring prominent laundry installations

PASADENA saw the *advantage*

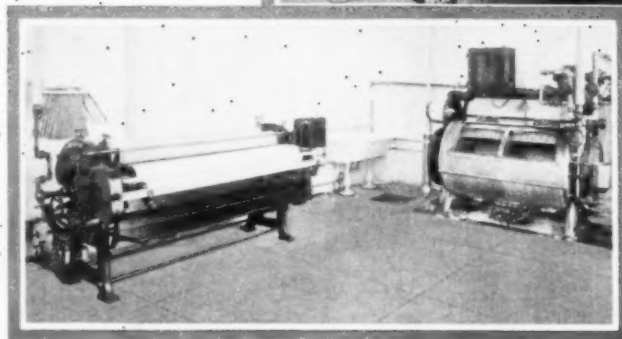
THE Board of Education of Pasadena, California, was quick to appreciate the advantage of installing a laundry department in connection with the magnificent new Pasadena High School.

Members of the Board saw the economy of having linens for the cafeteria and for domestic science classes laundered right on the premises—since it enables the school to maintain a smaller supply because of the rapidity with which the linens can be cleansed and returned to service.

They saw the advantage, too, of laundering athletic suits and towels under the direct supervision of the school's physical education department—In fact, today, more and more schools and colleges, as well as hotels, hospitals and institutions of every character consider a laundry department an increasingly important adjunct.



Another view of the laundry showing the American Thermo-Vento Drying Tumbler



Corner of the "American" equipped laundry at the Pasadena High School

Engineers of The American Laundry Machinery Company designed and installed the laundry in the Pasadena High School, using "American" equipment exclusively throughout. At your request, we shall be glad to send you full particulars of this installation—or any of the installations featured in this series of advertisements.

At your service — a corps of laundry specialists

The American Laundry Machinery Company maintains a corps of engineers who have gained wide experience in planning and equipping most of this country's foremost hotel, commercial and institutional laundries.

If you have any questions pertaining to modern laundry practice, you will find consultation with these specialists advantageous. This service is gladly offered you without any obligation whatever.

The American Laundry Machinery Co.

Norwood Station, Cincinnati, Ohio

THE CANADIAN LAUNDRY MACHINERY CO., LTD.

47-93 Sterling Road, Toronto 3, Ont., Canada

Agents: BRITISH-AMERICAN LAUNDRY MACHINERY CO., LTD.

Underhill St., Camden Town, London, N.W. 1, England



PASADENA HIGH SCHOOL, PASADENA, CALIF.

Architects: John C. Austin and Frederic M. Ashley, Los Angeles



THE MILLER HOSPITAL *"Handles With Care"*

GLASS containers filled with liquid—surely here are fragile objects that should be handled with care. ¶ Yet, at the new Miller Hospital in Saint Paul, Minnesota, they are zipped up and down several floors from the far ends of the building, instantly and without damage. ¶ A vacuum tube system (four inch diameter) of pneumatic conveying has solved for all time what has been for years a troublesome problem in hospitals everywhere. ¶ It was indeed gratifying for the Standard Conveyor Company to be allowed to work on this installation with the Architect, Clarence H. Johnston. ¶ We'll be glad to send an analysis of this installation to interested architects.

STANDARD
CONVEYOR COMPANY
NORTH ST. PAUL, MINN.

These Detroit Buildings are equipped with 2700

Athey Perennial Window Shades



Athey Skylight Shades
are equally as good as
Athey Window Shades

The Buhl Building, designed by Smith, Hinchman & Grylls (top)—the United States Mortgage Bond Building, designed by Harry S. Angell (center)—and the Detroit Free Press Building, designed by Albert Kahn (bottom)—are good examples of the fine buildings that are being equipped with Athey Perennial Window Shades.

Consider these Athey Features

Adjustability:

They can be raised from the bottom, or lowered from the top—folding like an accordion—permitting the shading of the part of the window that requires it, without shutting out all the light and air.

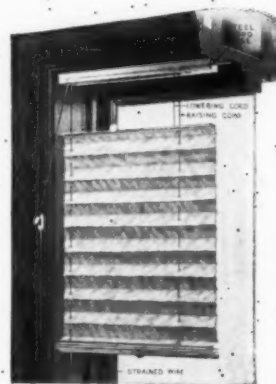
Eliminate Expense and Fire Hazard of Awnings:

They do everything an awning can do. With them, owners have discovered awnings are unnecessary.

Nothing to wear out or get out of order:

They have no latches, catches, springs or rollers to slip, stick or break. And the special Coult Weave Herringbone cloth of which they are made is as near indestructible as any cloth can be made.

We know of many installations made 10 years ago that are still "on the job" and in good order, and appearance.



Athey Products

Perennial Window Shades · Disappearing Partitions
Skylight Shades · Cloth-Lined Metal Weatherstrips



Athey Company

6025 West 65th Street · Chicago, Illinois

In Canada: CRESSWELL-McINTOSH, REG'D.
270 Seigneurs St., Montreal, Quebec

L.O. KOVEN & BROTHER, Inc.Engineers
MachinistsGalvanizers and
Sheet Metal WorkersWelders
Boiler Makers

A Reserve Storage Tank

Two Hot Water Tanks

Even though your hot water storage tank be a Koven Galvanized Tank, sediment will collect in it. Since this sediment does not come from the tank itself, it must come from outside. Two storage tanks provide for continuous service.

Hotels and Apartments

Especially in hotels and apartments where satisfied guests and tenants mean "a full house" and 100% revenue on rentable space, it is necessary to provide a continuous supply of hot water. Two full capacity tanks are needed to supply this continuous service.

*Information about Galvanized Storage
Tanks Supplied on Request*

L.O. KOVEN & BRO. Inc. 154 Ogden Ave. JERSEY CITY N.J.



Designing Swimming Pools for Swimming

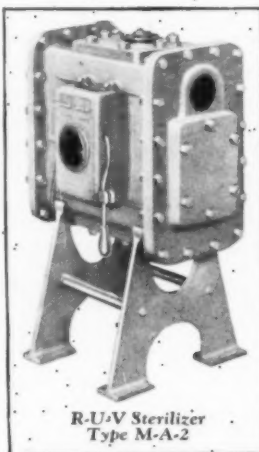
THE architect can specify real "swimming" water for the pools that he designs by including R-U-V, ultra violet ray, Sterilizers in the recirculating systems. This water will be positively pure and will be free from biting germicidal solutions. It will make swimming a real pleasure.

The powerful ultra violet rays, produced by the quartz mercury vapor lamp, of the R-U-V Sterilizers will seek out and destroy each harmful germ in each drop of water circulated through them. In addition, the rays will set up a residual germicidal action that helps to keep the water in the pool purer than that specified by the U. S. standards

as pure drinking water. There is no chance for the spread of infection and disease. The health of every pool user is positively protected.

These positive safeguards are assured with no loss in the refreshing qualities of the water. R-U-V Sterilizers add no biting chemical solutions to it. They can in no way change its original composition or refreshing "feel."

It is a pleasure to swim in such water—free from the danger of infection and disease and free from the unpleasantness of biting germicidals. That's the kind of water that makes swimming pools fit for swimming. Read the guarantee in our Booklet F-12.

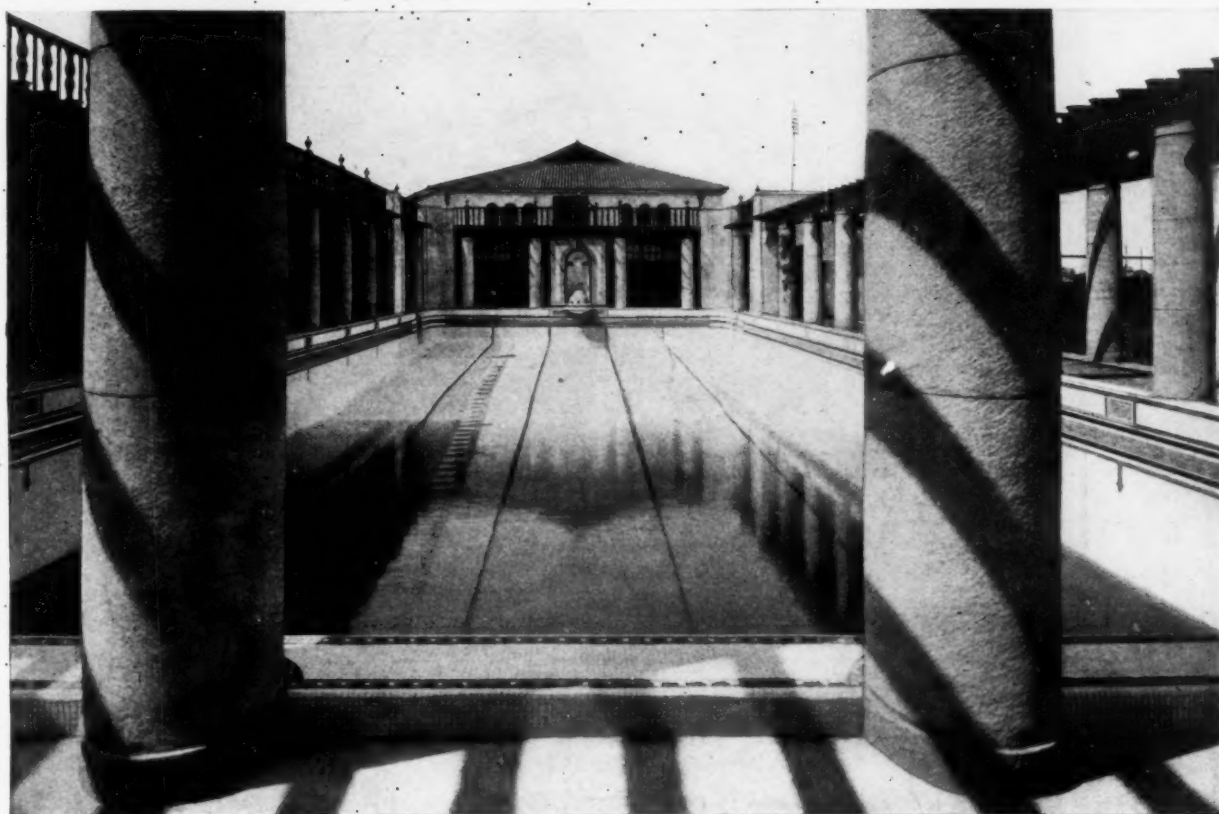


R-U-V Sterilizer
Type M-A-2

The R. U. V. Co., Inc.
383 Madison Ave.
New York City

James B. Clow & Sons
534-546 S. Franklin St.
Chicago, Ill.





Swimming Pool at - AMERICAN COUNTRY CLUB - Shanghai, China

"SWIM IN DRINKING WATER"

"SWIMMING pool water",—says the Surgeon General of the U.S. Army,—“is essentially drinking water and must be measured by drinking water standards”.

The drinking water standards of the U. S. Public Health Service limit the bacteria to 100 per cubic centimeter, and insist that the colon bacillus (the sewage germ) be absent in 100 cubic centimeters.

Each day five billion gallons of DRINKING WATER meet these standards because the water is **CHLORINATED**,—sterilized with **W&T EQUIPMENT**.

CHLORINATION makes the pool water conform to drinking water standards. It is particularly applicable to Swimming Pool Sanitation because it **STERILIZES** the water and its action is continuous in every portion of the pool.

W&T EQUIPMENT, reinforced by a country wide organization, is today sterilizing hundreds of swimming pools throughout the world. A staff of experts is maintained to advise on any problem connected with Swimming Pool design, construction, or operation, without expense to the supervising architect.

Inquiries are invited at any of our offices. Technical Publication No. 41 will be sent on request.

"The only safe water is a sterilized water".



WALLACE & TIERNAN

COMPANY, INCORPORATED

NEWARK - NEW JERSEY



NEW YORK CHICAGO KNOXVILLE SAN FRANCISCO MINNEAPOLIS PITTSBURGH DALLAS KANSAS CITY
LOS ANGELES SEATTLE ST. LOUIS BUFFALO HARRISBURGH INDIANAPOLIS DETROIT
WALLACE & TIERNAN, LTD., TORONTO, CANADA



Ball Gymnasium, Indiana State Normal
School at Muncie. Roofed with Federal
Interlocking and Flat Tile.
Kibele & Garrard, Architects

for SCHOOLS *and* COLLEGES

EDUCATION itself is typified by the permanent character of the modern structures which house institutions of learning. The outstanding responsibility of every community today is the provision of adequate, attractive and permanent school and university buildings. More and more, architects, builders, boards of education and educators generally have come to give due importance to roofs. The result is that a steadily increasing number of schools and colleges are being roofed with Federal Cement Tile. Why? Because there is no other roof material which will give equal service with no maintenance cost. Federal Cement Tile come to the job ready for installation on any type of flat or pitched roof regardless of weather or temperature conditions. Write for complete details. Federal Cement Tile are made, laid and guaranteed by

FEDERAL CEMENT TILE COMPANY
608 S. Dearborn Street Chicago

FEDERAL
Cement Tile
"The Roof for Permanence"



Architects
Hugh Tallant and
J. E. R. Carpenter
New York, N. Y.

HURT BUILDING
Atlanta, Ga.

Contractors
Realty Construction
Company
Flint, Mich.

They are ready to back your clients too

MANY a man who today owns a desirable piece of property is prevented from erecting on it a valuable, income-earning building by just one thing—financing. But many a man in just this position has been enabled to go ahead with his project by just one thing—the Miller Plan of Financing.

The Miller Plan brings to your client or prospective client the financial aid of men and women in all parts of the country who are satisfied investors in Miller First Mortgage Bonds. Though they are strangers to your client personally, they are able and willing to aid him because of the fine record of safety, combined with liberal earnings, that Miller Bonds possess.

Whether he contemplates the erection of a hotel, apartment building or office structure, he will do well to consider the advantages of the Miller Plan of Financing.

Periodic disbursements are made as the building is constructed. Building is sufficiently financed

at the outset. This financing is secured by a first mortgage on land and building, extending over a long period of time. Convenient payments, out of income from the completed structure, take care of interest and reduce amount of indebtedness. Financing less expensive. No shopping for money. Best type building is produced. Architect's ideas are carried out.

By the simple operation of the Miller Plan, the owner is relieved of the worrisome details of the ordinary loan.

From \$250,000 to \$1,000,000 and more

We are ready to place at the disposal of owners any amount from \$250,000 up, which will be secured by a first mortgage on land, building and equipment.

Find out more about how this Miller Plan of Financing operates. Read enthusiastic letters from owners and builders for whom we have negotiated first mortgage bond issues. *Write for Booklet L-302.*

G. L. MILLER & CO.

INCORPORATED

Northern Headquarters—30 East 42nd Street, New York City

Southern Headquarters—Hurt Building, Atlanta, Ga.

This is what an eminent English Architect says of the Fifth Avenue Hospital, New York City:

The New York Times

"All The News That's Fit to Print"
Published Every Day in the Year by
THE NEW YORK TIMES COMPANY.
ARTHUR H. OCHS, Publisher and President.
E. C. Franck, Secretary.

NEW YORK, SUNDAY, SEPTEMBER 27, 1925.

LAUDS AMERICAN HOSPITALS

Pearson, London Architect, Calls
Fifth Av. Institution World's Best.
Copyright, 1925, by The New York Times Company.
By Wireless to THE NEW YORK TIMES.

LONDON, Sept. 26.—"Probably the best planned and best equipped city hospital in the world" is what the Fifth Avenue Hospital in New York is called by Lionel G. Pearson, London architect, who contributes an article on American hospitals to the current issue of The Architect.

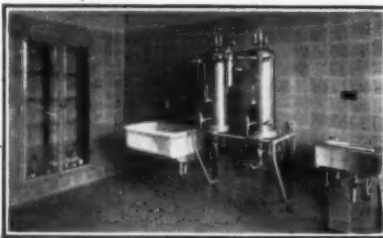
Comparing American and English hospitals, he writes that at the former "the course of a patient from the time he leaves the building to the time he leaves it, dead or alive, as traced just as Henry Ford traces his car production." Mr. Pearson adds:
"As to the tendency to rely more and more on mechanical contrivances certainly
ericans



All
surgical equipment
in the FIFTH AVENUE
HOSPITAL was supplied
by the KNY-SCHEERER
CORPORATION

Make use of the Kny-Scheerer Contract Department

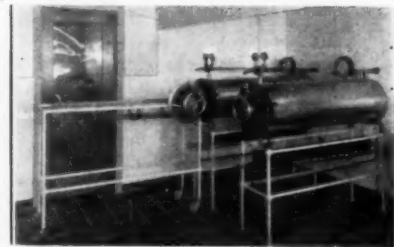
Write for Booklet # C-100



Showing K-S combination Water and Instrument Sterilizer with recessed cabinets, Fifth Avenue Hospital



Showing Operating Room, Fifth Avenue Hospital



Showing K-S Dressing Sterilizers, Fifth Avenue Hospital

The KNY-SCHEERER Corp.

OF AMERICA

119-125 Seventh Avenue (Dept. 101)

New York, N.Y.

Include This Service In Your Building Plans For Schools and Colleges

The value of motion pictures to greater progress of students has been conclusively demonstrated in hundreds of educational institutions.

Adequate provision for motion picture and stereopticon service should be incorporated in all alteration or new building plans for schools and colleges.

The manufacturers of the Simplex Projector, the machine universally recognized as one of the finest in the world, extend to architects and builders a free service in projection room designing that saves time and effort and eliminates all possibility of error.

A number of Blue Prints of Projection booths suitable for schools and colleges have been prepared by Simplex engineers who have had years of experience in projection work and whose expert service is sought by many of the largest theatres in the country.

Requests for Simplex Blue Prints entail no obligation as this service is provided entirely in the interest of good projection.

Mail the attached coupon or write the

PRECISION MACHINE COMPANY, Inc.
317 East 34th Street New York City

COUPON

PRECISION MACHINE CO. Inc.
317 East 34th Street, New York City

Please send me your free set of Projection Room
Blue Prints.

Name.....

Address.....

City..... State.....

ABUNDANT HOT WATER SUPPLY

From the Heating Plant

THE Excelso Indirect Heater has introduced a new measure of comfort and economy in over 300,000 homes.

Specify its installation and let the steam or vapor heating plant supply hot water needs.

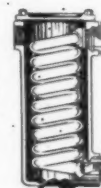
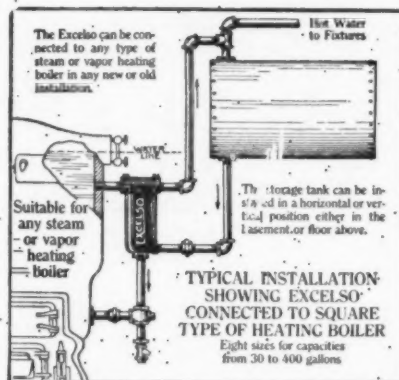
Descriptive literature gladly furnished.

EXCELSON SPECIALTY WORKS, Inc.
69 Clyde Ave., Buffalo, N. Y.

210 E. 45th St.
New York, N. Y.

District Representatives:
46 Cornhill
Boston, Mass.

5939 Haverford Ave.
Philadelphia, Pa.



Single Coil

EXCELSON WATER HEATERS

Nationally Distributed by Leading Jobbers and Boiler and Radiator Manufacturers

Kewaunee

LABORATORY FURNITURE



Free from Warping After Years of Service

LABORATORY Furniture receives hard usage, unavoidably. That's why, just the right kind of lumber, properly seasoned and prepared, is absolutely essential in the manufacture of good laboratory furniture.

It is customary to receive such reports of Kewaunee, years after installation, as the following letter from the American Rolling Mill Co., Middletown, Ohio:

"We are very well satisfied with the results which we have obtained from the use of this furniture, as we find it all that you claimed for it. The tables are flat and free from warping as when installed."

The latest edition of the Kewaunee Book of Laboratory Furniture is now ready for distribution.

Address All Inquiries to the Factory at Kewaunee

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

C. G. CAMPBELL, Treas. and Gen. Mgr.
New York Office: 70 Fifth Avenue
141 Lincoln Street
Kewaunee, Wis.
Offices in Principal Cities



POWER'S PROJECTORS

Standard Professional Motion Picture Machines

are used by

YALE UNIVERSITY

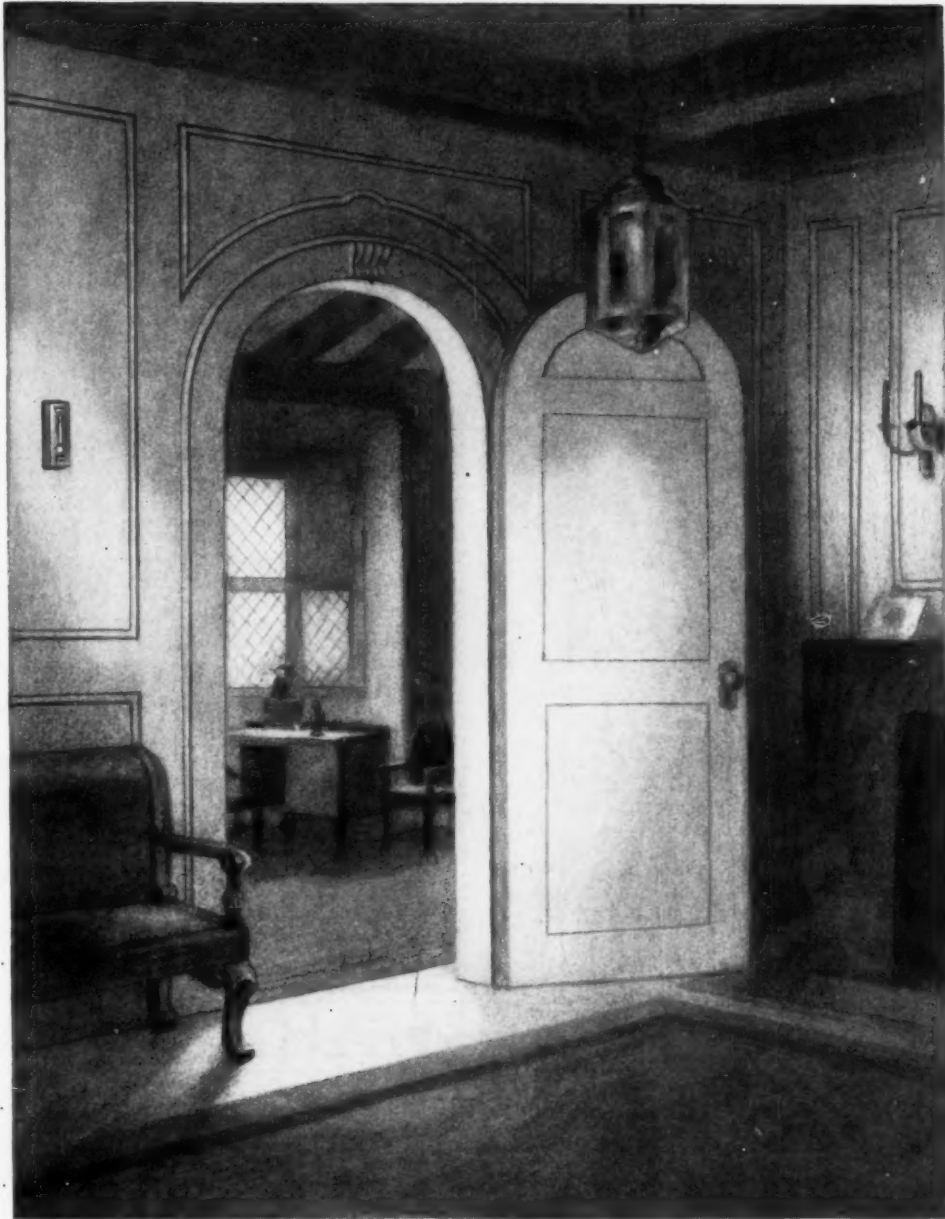
NATIONAL ACADEMY OF SCIENCES

CASS TECHNICAL HIGH SCHOOL

And thousands of Schools, Colleges, Churches and Public Institutions throughout the world.

We are always pleased to supply information to architects regarding the planning and equipping of projection rooms.

NICHOLAS POWER COMPANY
INCORPORATED
NINETY GOLD ST. NEW YORK, N.Y.



The Johnson System of Temperature and Humidity Control is brought up fully to heat-regulation demands in design and construction. That is why it comes up fully to requirements in service and results. Where complete knowledge of Johnson perfections and Johnson performances exists no building is erected without it. Where such complete knowledge does not exist it should be definitely acquired. The consequences are too serious to be disregarded.

Every Johnson Installation Is Made By Johnson Engineers And Mechanics Only, And Not Let To Outside Or Local Attention: Which Makes Additionally Certain of Successful Operation.

JOHNSON SERVICE CO. MILWAUKEE, WIS.

AUTOMATIC TEMPERATURE REGULATION SINCE 1885
JOHNSON OWNED BRANCHES IN 28 PRINCIPAL CITIES, UNITED STATES AND CANADA

JOHNSON

SYSTEM OF TEMPERATURE AND HUMIDITY CONTROL

Chicago Pumps



BELL BUILDING

M. J. Corboy, Co.
Plumbing Contractors

K. M. Vitzthum
Architect

AMONG the buildings of outstanding beauty today, there are few whose service equipment and engineering accomplishment do not deserve equal admiration.

The rapidly growing list of successful "Chicago" Pump installations, in buildings of this character has a truly notable addition in the Bell Building, Chicago. Located at the intersection of the New Wacker Drive and Michigan Boulevard, The Bell Building is a magnificent structure, pleasing to the eye and a source of pride to Chicagoans.

Down deep below the ground, far from the eye of the admiring crowds, a duplex set of Chicago Bilge Pumps keep the lower parts free from seepage.

Chicago Pump Company

Manufacturers of quality centrifugal pumps for every service

Condensation—Vacuum—Sump—Sewage—House—Circulating

2316 Wolfram St., Chicago, Ill.

Representatives in principal cities

A F 12-25 RHM

PUMPS

*A type for every
service*

Bulletins on request

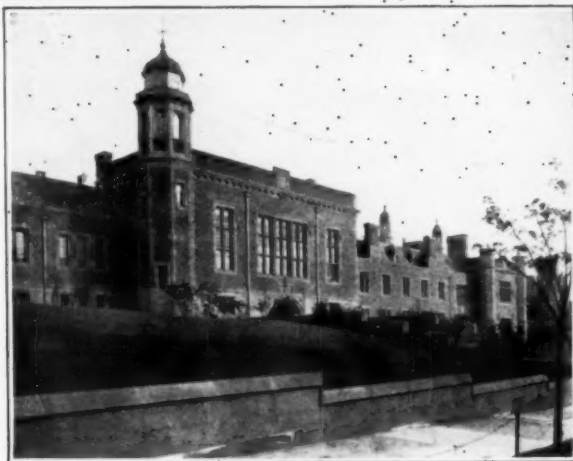
THE GOULDS MANUFACTURING CO.

SENECA FALLS, N. Y.

Branches or Agents in All Principal Cities

GOULDS

SASH CHAINS



Sterling Memorial Chemical Laboratory
Yale College, New Haven, Conn.

Many of the college buildings of the country are equipped with Smith & Egge Sash Chains

THE SMITH & EGGE MFG. CO.

Bridgeport, Conn.

ORIGINATORS OF SASH CHAINS

HORN-WATER-PROOFINGS

Wouldn't You Say These Architects Are Right?

There was nothing in the immediate or surrounding conditions to demand the waterproofing of the foundation walls in the McCutcheon Building. But, the architects as a positive preventative against any possible future conditions, insisted that all foundation cement and mortar be integrally water proofed with Hydratite.

Water mains can break—unforeseen water happenings can happen, and the below ground space in the building will be unaffected.

Hydratite to these architects emerges from a mere waterproofing and takes the form of an indispensable all-time-insurance.



The McCutcheon Building at
Fifth Avenue and 49th Street,
New York

Cross & Cross, Architects
Starrett & Van Vleck, Associate
Architects

Dehydratines

No. 1—Replaces furring, or used in conjunction with it—to damp-proof the interior surface of exposed brick or terra cotta walls—before plastering.

No. 2—A transparent damp-proof coating for the exterior of stone, brick—concrete walls. Preserves the surface and prevents discolorations.

No. 10—Damp-proofs exposed walls, with a heavy troweled coating on the inside face. Replaces furring. The most positive method of damp-proofing.

No. 80—A liquid compound to lubricate, hasten the hardening and permanently strengthen cement, mortar and concrete mixtures.

Hydratite

Water-proofs concrete and cement mortar integrally and permanently. Used in mortar joints—stucco—foundations and floors.

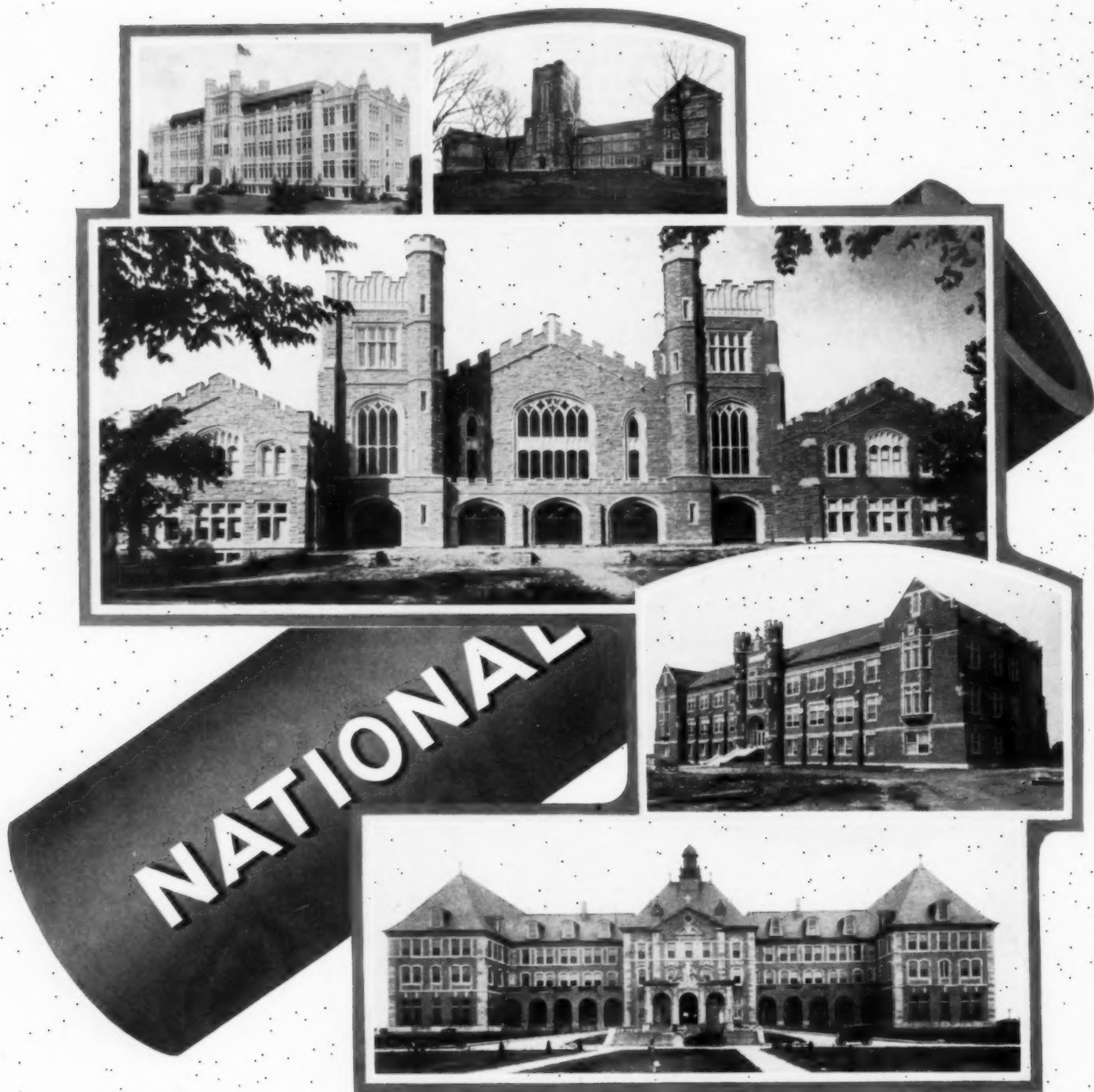
Vulcatex

A water proofing plastic compound for caulking and pointing.

A.C. Horn Company

LONG ISLAND CITY, N. Y.

59 Horn Building



The Logical Choice for College Buildings

THE need for higher education will remain as long as civilization itself. The quest for greater knowledge is constantly on the increase. No longer is it necessary to "sell" education—it is now simply a question of accommodation. This means an increasing number of larger and better equipped school and college buildings.

A tendency towards improvement in design and a more substantial character of structure has already set in and in recent years much progress has been made. That these im-

provements and still greater investments may be safeguarded—the architects and engineers responsible have been careful to select building materials of substantial character—materials that have proved their worth and that will meet the increased demands of the future.

It may be significant to those interested in this type of structure that in a very large number of America's finest school and college buildings "NATIONAL" Pipe is used. See Bulletin No. 25—free on request.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

GENERAL SALES OFFICES: FRICK BUILDING

DISTRICT SALES OFFICES

Atlanta Boston Chicago Denver Detroit New Orleans New York Salt Lake City Philadelphia Pittsburgh St. Louis St. Paul
Pacific Coast Representatives: U. S. Steel Products Co. San Francisco Los Angeles Portland Seattle
Export Representatives: U. S. Steel Products Co. New York City



Every architect knows the lasting qualities of Armco—pure Ingot Iron. No material can equal it for lath. This company has the exclusive right to its use in metal lath.

They know the difference that Herringbone makes

Other GF Materials:

- Self-Sentering**—A combined form, lath and reinforcement for concrete floors and roofs.
- Trussit**—A reinforcement for solid partitions.
- GF Expanded Metal**—A concrete reinforcement.
- GF Steel Tile**—For concrete floors.
- GF Steel Lumber**—Used in place of wood joists and studs.
- GF Steel Channels**—For fireproof partitions and ceilings.
- GF Peds**—Spot grounds for attaching trim to concrete and plaster.
- GF Duplex Steel Bridging**—For wood joist floors.
- GF Steel Sash.**
- GF Steel Basement and Casement windows.**
- GF Lintels.**
- GF Industrial Steel Doors.**
- GF Wire Mesh.**
- GF Waterproofings**—For concrete and masonry.

THERE was a time when home owners and home buyers considered plaster cracks as unavoidable evils. But that was before they had been told about metal lath, especially Herringbone Metal Lath.

Now they know that walls needn't crack in years! They know that ugly lath streaks, checks and cracked plaster mean that the house is not built as well as it might be. They know that if Herringbone were back of the plaster, the walls would be permanently free from such disfiguration.

You'll find that home builders are more than willing to pay the slight difference in first cost of Herringbone. They realize that the saving in erection cost and the elimination of future repair bills, alone, makes the use of Herringbone a

real economy. And because Herringbone is the only lath made of the famous Armco Ingot Iron, it is good for a life-time.

As a guarantee of lasting wall beauty, the use of Herringbone is unsurpassed. The plaster works through and around the mesh, and clinches in behind it with a grip that no amount of shrinkage can loosen. The mesh becomes completely embedded in the plaster slab and reinforces every inch of it perfectly. You can always be proud of a Herringbone wall or stucco exterior.

There are innumerable applications of Herringbone, both exterior and interior. Our hand book—"Herringbone Rigid Metal Lath"—gives these in detail. You should have a copy in your files. We'll gladly send it, without charge, on request.

THE GENERAL FIREPROOFING BUILDING PRODUCTS
Youngstown, Ohio

Branches: New York • Chicago • Philadelphia • Boston • Cleveland • Los Angeles • St. Louis • Omaha • Kansas City • Minneapolis • Milwaukee • San Francisco • Syracuse • Atlanta • Mexico City
Export Department: 90 West St., New York City • Cable Address: "Firegen-New York"

Member National
Council for Better
Plastering



BETTER PLASTERING

GF Herringbone Doublemesh Lath

Threading "Central Black" and "Central White" Conduit



There is the same care and accuracy in threading "Central" Conduit as in every operation in the "Central" plant.

AFTER being cut into 10-foot lengths, as illustrated at the right, a large lift of plain end pipe in conduit lengths is placed on the rack, shown at the right of the above picture. The operator in the rear takes a length and threads one end. He then passes it to the operator in the foreground who threads the other end and passes the length to the rack shown at the right of the picture.

Great care is exercised in the threading of "Central" Conduit. All machines are kept in perfect condition, and chasers are changed and sharpened at regular intervals, to insure clean, smooth threads.

ARCHITECTS, aware of the importance of accurate, clean-cut conduit threads, will find interesting the "Central" threading process here illustrated and described.



Before "Central" Conduit is threaded the pipe is machine cut into 10-foot lengths.

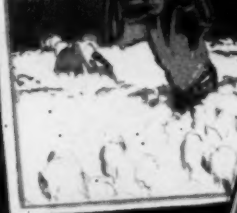
Standard gages are used continually to insure correct thread sizes.

The length of the thread is controlled in the machine and is watched carefully, so that all threads are of the same length on the respective sizes.

All pipe is reamed during the threading operation which removes the fin or projection caused by the cutting.



GENERAL OFFICES - FIRST NATIONAL BANK BUILDING
PITTSBURGH
DISTRIBUTORS IN ALL LARGE CITIES

FLEXTUBENON METALLIC
CONDUITCOTTON
AND
INSULATING
FIBRE
WOVEN INTO
A SOLID WALL**ECONOMY**BLACK
ENAMELED
RIGID
CONDUIT**NATIONAL
BRACKETS**Easy Bending, Great Fit
and Permanence**Flexsteel**
Flexible Metallic Conduit**LIGHT**
Sealed and Delivered
Anywhere**5 FREE
booklets**

MAKING Conduits, Cables, and Fittings, for safe, permanent and trouble-free electrical wiring is the sole business of the National Metal Molding Company. Five of the products are fully and completely described in these booklets. Send for them.

ECONOMY Black Enameled Rigid Conduit, protected by double-dipped, acid-resisting coating of enamel—baked on.

FLEXTUBE Non-metallic, solid-wall Conduit. Never kinks! Bend it, jerk it, twist it, easily works back into shape again. The soap-stoned interior makes fishing easy.

FLEXSTEEL Flexible Metallic Conduit, pliant as a rope of woven steel! Designed to withstand weather and moisture. Of great flexibility and permanence. Full line of sizes.

OVALFLEX A Flat Armored Cable only 5/16" thick. Bends edgewise and flatwise. Lay it on brick, tile or concrete without cutting or chipping and plaster right over it.

NATIONAL BRACKETS Designed so that wires can be attached or threaded and built to withstand excessive strain.

National Metal Molding Company**1420 FULTON BUILDING
PITTSBURGH, PA.**

Represented in All Principal Cities

(x46)

National Metal Molding Company



The New MASONIC TEMPLE

Nearing Completion at
St. Louis, Mo.

Associated Architects

Eames & Young

Albert B. Groves

General Contractors

Westlake Construction Co.

Plumbing Contractors, J. M. Wheeler & Co.

EQUIPPED THROUGHOUT WITH THE

Watrous

Duojet Wall Closet and Flush Valve



THE recognized sanitary advantages of the wall-hung closet are supplemented by other important advantages in the Watrous Duojet Wall Bowl. It has solved the problem of *first cost*, and has also removed all chance of clogging and overflowing.

A glance at the illustration on the left shows how the Watrous Duojet Wall Closet facilitates the work of keeping the toilet room floor clean and sanitary. It also promotes economy in constructing new buildings, as it is not necessary to leave provision in the floor for closet connections; a "furred" ceiling is avoided, and installation is made without complicated fittings.

Also, the Watrous Duojet type eliminates the narrow outlet needed beyond the trap in other types of wall closet. The Watrous design therefore prevents clogging, overflowing and heavy repair bills. The Watrous Flush Valve delivers the exact quantity of water required for a thorough flush and refill, and effects a heavy saving in annual water bills.

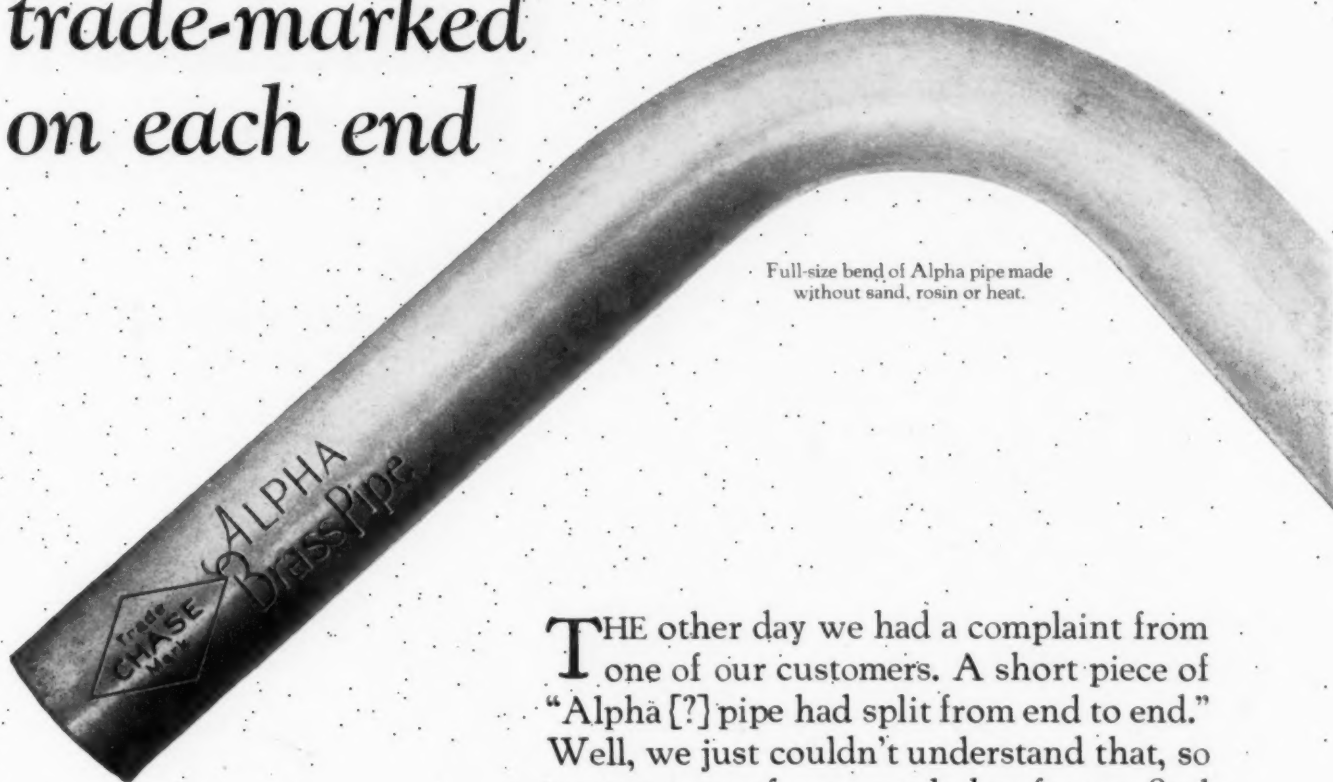
*For full details on the Watrous Flush Valve
and Duojet Bowl, write for Booklet CC*

PLUMBING DIVISION

Watrous Flush Valves — Duojet Closets — Self-Closing Basin Cocks — Combination
Lavatory Fixtures — Pop-Up Wastes — Drinking Fountains — Liquid Soap Fixtures — etc.

THE IMPERIAL BRASS MANUFACTURING COMPANY
1238 West Harrison Street (Established 1885) CHICAGO

Every length is
trade-marked
on each end



ALPHA Brass Pipe

contains only Alpha crystals which make a dense, ductile and tough brass that offers greater resistance to corrosive waters. Because it contains more copper and lead it makes better bends and cuts and threads easier.



CHASE COMPANIES

INCORPORATED
WATERBURY, CONNECTICUT
Chase Metal Works — Chase Rolling Mills

STOCKS

Chase Companies of New Jersey, Newark,
The Ohio Chase Company, Cleveland,
Chase Companies of California, San Francisco,
Los Angeles

OFFICES

Boston New York Philadelphia Rochester
Pittsburgh Chicago St. Louis Denver Atlanta
Members Copper and Brass Research Association

THE other day we had a complaint from one of our customers. A short piece of "Alpha [?] pipe had split from end to end." Well, we just couldn't understand that, so we sent one of our people hot-foot to find out. To make a long story short, we proved that it wasn't Alpha pipe and the plumber remembered that he had used that one piece of pipe of unknown make which was picked up in his shop. He thought it was all right. Now, he knows the difference.

We had been marking our pipe on one end only—now we mark it four feet from each end so that even short pieces will carry our guarantee.

Alpha pipe is better and our little book on Alpha brass tells why. May we send you a copy?

CHASE COMPANIES, INCORPORATED, Waterbury, Conn.

Please send me free of charge a copy of your book on Alpha Brass.

AF-0320-10

Name _____

Position _____

Firm _____

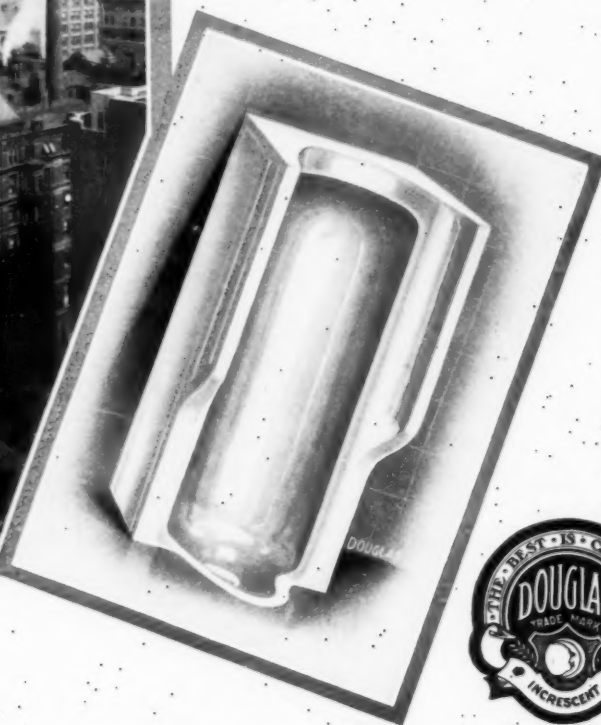
Address _____



Vitreous China Urinal Stalls

for

Murray Hill Building
New York City



ROUSE AND GOLDSTONE, Architects, N. Y.

JARCHO BROS., INC., Plumbing Contractors, N. Y.

Although Vitreous China Urinal Stalls have been manufactured only a short time, they have been accepted and specified in every state.

The reason for the immediate recognition of this new piece is the unqualified opinion that Vitreous China is the most sanitary material from which plumbing fixtures can be made.

Vitreous China Water Closets and Lavatories have long been considered a standard requirement of all good building.

Douglas Vitreous China Urinal Stalls are made of the same vitreous body as their water closets and lavatories—and are full-sized.

Dimensions—Height 43 inches over all, from finished floor to top of
Urinal 39 inches, width 18 inches full.

Guaranteed not to craze, stain or discolor. It is non-porous, so it will not absorb odors. Has a gleaming white surface, which is easily cleaned. Assuring a fixture of quality.

Upon request we will send descriptive literature and names of buildings in your vicinity where Douglas Vitreous China Urinal Stalls are being used.

Manufactured by

The John Douglas Co.
Makers of High-Grade Plumbing Fixtures

General Office
Cincinnati, Ohio

Factories
Cincinnati, Ohio
Trenton, N. J.



Do Your Plans Include a Pipe Chamber?

IN ALL classes of building where a pipe chamber is possible "Universal" Wall Closet as developed by "Te-pe-co" will be found ultimately economical.

Note in the above illustrations that the "Universal" has all the desirable features of the wall-hung closet plus a simplified installation that requires no carrier.

This highly sanitary fixture is of the syphon jet construction in a design that includes the extended lip feature, and a

large vent passage from the bowl opening vertically into the pipe chamber.

The "Universal" is connected to the floor by the Donovan Safety Flange, insuring both the safest support without strain on the wall and a perfect seal at the joint.

If your plans require a closet of this type, you will gain much by consulting your jobber on the "Universal." Like all other "Te-pe-co" products the tank and bowl are of two-fire Vitreous China.

The
TRENTON POTTERIES COMPANY
TRENTON, N. J., U. S. A.

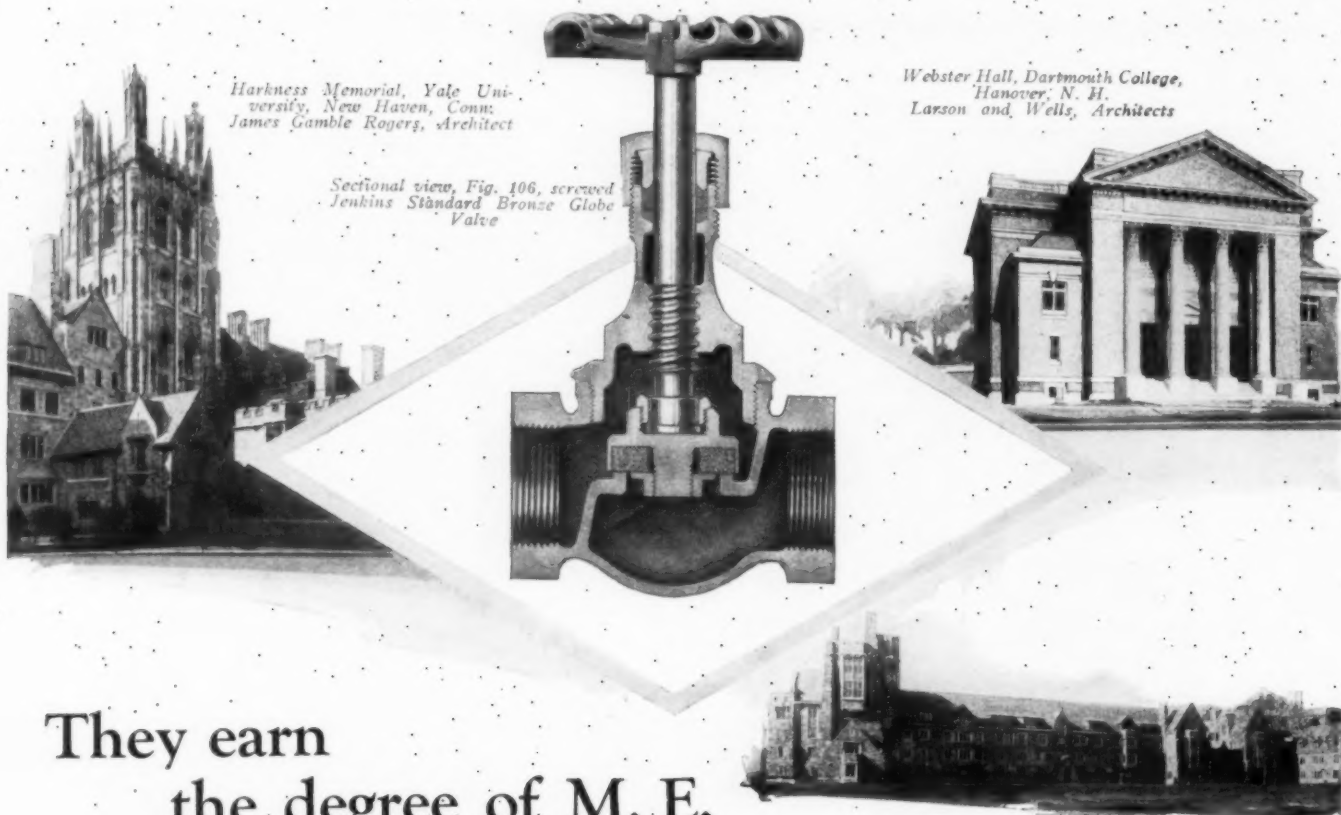
BOSTON

SAN FRANCISCO

NEW YORK

TE-PE-CO
ALL-CLAY PLUMBING FIXTURES





Harkness Memorial, Yale University, New Haven, Conn.; James Gamble Rogers, Architect

Sectional view, Fig. 106, screwed Jenkins Standard Bronze Globe Valve

Webster Hall, Dartmouth College, Hanover, N. H.; Larson and Wells, Architects

Henry and Foulke Dormitory, Princeton University, Princeton, N. J.; Zantzeiger, Borie and Medary, Architects

They earn the degree of M. E.

M. E. means Maintenance Economy. Many colleges and universities confer this degree on Jenkins Valves.

These valves contribute much to the economical maintenance of a power plant and of plumbing, heating and fire protection systems. The reasons are:

(1) There is a complete line of Jenkins Valves of bronze and iron in standard, medium and extra heavy patterns—a line which insures the right valve for each service.

(2) Each genuine Jenkins Valve is designed for the maximum service, not merely the average. There is a reserve margin which promotes trouble-free performance.

(3) Each is thoroughly standardized in manufacture, and parts are interchangeable. This means a veteran Jenkins Valve can always be supplied with a replacement part that fits.

(4) The valves are simple of operation. They require neither close attention nor frequent adjustment to keep them in working order.

(5) Jenkins Valves are obtainable at supply houses everywhere. Their distribution is nation-wide, the source of supply is handy in every community.

Not alone for institutions of learning, but for buildings of every type, architects and engineers, in promotion maintenance economy, may rely on Jenkins Valves.

Jenkins service is best assured by the specification of genuine Jenkins Valves... "always marked with the Diamond."

Architects and engineers interested in university and school construction are invited to write for our book covering the uses for Jenkins Valves.

JENKINS BROS.

80 White Street.....New York, N. Y.
524 Atlantic Avenue.....Boston, Mass.
133 No. Seventh Street, Philadelphia, Pa.
646 Washington Boulevard...Chicago, Ill.

JENKINS BROS., LIMITED

Montreal, Canada London, England

FACTORIES

Bridgeport, Conn. Elizabeth, N. J.
Montreal, Canada

Always marked with the "Diamond"

Jenkins Valves

SINCE 1864

These and many others are Jenkins-equipped

Yale University
Dartmouth College
Princeton University
Cornell University
Columbia University
Syracuse University
University of Pennsylvania
Carnegie Institute of Technology
University of Pittsburgh
University of Texas
West Virginia University
Georgia School of Technology
Smith College
Fordham College
Vassar College
Ohio State University
Lehigh University
Lafayette College
Penn. State College
Vanderbilt University
University of Wisconsin

Signals!



**THE
OVERLOADED
BEAM GROANS!**



**THE LOOSE
BEARING
RATTLES!**



**THE
SICK BABY
BAWLS!**

Calling the Roll of Trane Bellows Trap Users

WATKINS DEVELOPMENT
Central Heating
Pittsburg, Pa. 2500
FORD MOTOR CO. DETROIT
50-75 lbs. press. 1000
SHERMAN SQ. APTS.
New York, N.Y. 684
DETROIT EDISON COMPANY
Detroit (super-
heated steam) 582
WILLETTS APARTMENTS
New York, N.Y. 530
ST. ELIZABETH HOSPITAL
Dayton, Ohio 383
MILLER & SONS, LTD.
Concord, Can. 300
MEDICAL ARTS BUILDING
N.p't News, Va. 281
YELLOWSTONE PARK
TRANSPORTATION CO.
Gardiner, Mont. 251
SCHAFER APARTMENTS
Atlantic City 238
CHINA UNITED ASSURANCE
BUILDING
Shanghai, China 232
COMMERCIAL NATIONAL BANK
Raleigh, N. C. 222
NEW BARNETT HOTEL
Canton, Ohio 200
FORD MOTOR COMPANY
Iron Mountain,
Mich. 200

(continued)



and Here's a TRAP that tells you how it feels

How do the Ford Motor Company, Detroit Edison Company, Watkins Realty Company, and all other Trane Bellows Radiator Trap users actually **KNOW** their traps are functioning properly?

They know because Trane traps are SIGNAL traps. If a Trane trap wasn't doing what it is designed to do it would SIGNAL.

And when a Trane trap started to SIGNAL there wouldn't be any question about how it was feeling. Users would notice that, for some reason or other, the radiator to which the trap was attached *wasn't giving off as much heat as the other*

radiators. It would be more like a hot water system radiator than a vapor or vacuum system radiator.

That's all there is to the SIGNAL. But that is all you want; it's all you *need*. A low temperature radiator is *mighty easy to find*.

You will probably never see these Signal Traps SIGNAL. Trane traps are built so they won't be called upon to Signal. But the feature is built into them nevertheless. Call it the "Teeth in the Trane Five-Year Guarantee" if you wish. Anyhow, remember that Trane traps are designed so you *know* they are right.

Complete details will gladly be sent on request

HEATING TRANE PRODUCTS PUMPING

THE TRANE COMPANY, 220 Cameron Ave., La Crosse, Wis. Manufacturers of vapor and vacuum heating specialties and pumps. Branches and sales connections at New York, Chicago, Boston, Philadelphia, Buffalo, Cleveland, Detroit, Seattle, Los Angeles, Albany, Minneapolis, Salt Lake City, Ft. Wayne, Portland, Oregon, Greensboro, N. C., Zanesville, Ohio, Atlanta, Ga., Baltimore, Md. In England: 22-23 Clerkenwell Close, London, E. C. 1. In Canada: The Trane Co., 23 River St., Toronto; Thomas Robertson & Co., 134 Craig St. West, Montreal; F. S. Murdock, 310 Broadalbane, Winnipeg. In Japan: The Uchida Trading Co., Ltd., Tokio—Osaka—Kobe. In China: C. J. Doughty & Co., 7 Jinkee Road, Shanghai.



NEW UNION STATION, CHICAGO

Equipped exclusively with "EVERNU"

50,000 people, going to and from 300 trains, pass through Chicago's new \$60,000,000 Union Station every day. The building is magnificent in beauty and utility, the equipment throughout the finest.

Architects and engineers realized that the toilet seats in the building had to be the ultimate in fine appearance and durability. Therefore they specified "Evernu" Hard Rubber Toilet Seats. They knew that the Evernu construction, although everlasting, never

shows its age; that there is no finish to wear off and that the beauty of the seat is as deep and enduring as the hard rubber itself; that there would be no repairs or replacements; that the upkeep cost would be negligible.

This is the seat you should specify for your clients to insure lasting fine appearance and economy.

There is an Evernu model for every type bowl and architects are privileged to specify the hinge metal. Complete specifications will be found in Sweet's catalog.

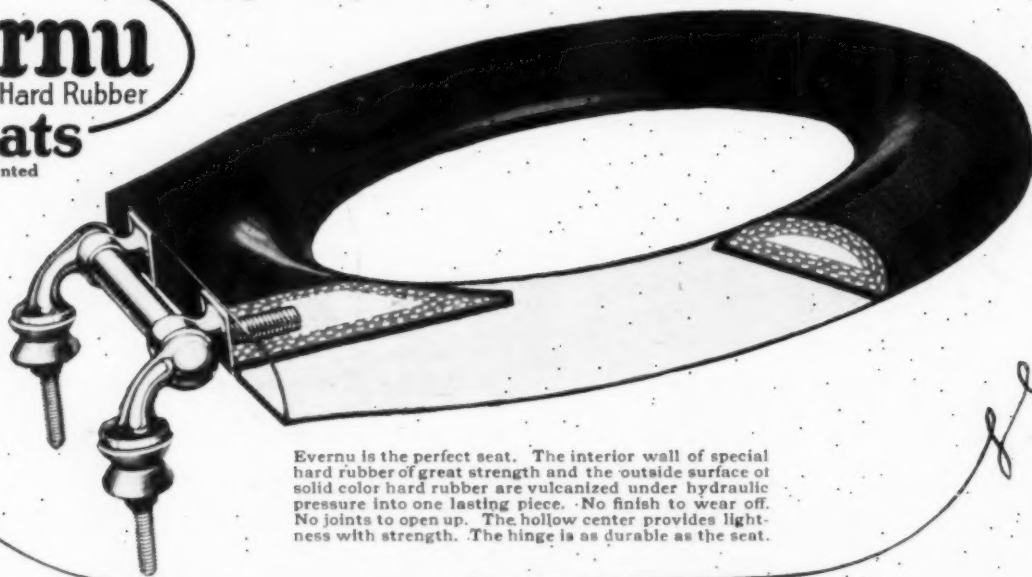
NEVER SPLIT SEAT COMPANY

Dept. 1212, Evansville, Indiana, U. S. A.

Founded 1905

Largest Manufacturers of Toilet Seats in the World

Evernu
Everlasting Hard Rubber
Seats
Patented



Evernu is the perfect seat. The interior wall of special hard rubber of great strength and the outside surface of solid color hard rubber are vulcanized under hydraulic pressure into one lasting piece. No finish to wear off. No joints to open up. The hollow center provides lightness with strength. The hinge is as durable as the seat.



Residence of Fletcher Cowherd, Jr., 6140 Morningside Drive, Kansas City, Mo.; Selby H. Kurfiss, Architect, Kansas City; Kohler Plumbing Fixtures furnished by U. S. Water & Steam Supply Co., Jobbers, Kansas City; installed by C. W. Herold Plumbing & Heating Co., Plumbers, Kansas City

THE Fletcher Cowherd Co., Kansas City, Mo., builds fine homes, equipping them, almost always, with Kohler Plumbing Fixtures.

In building for himself, the vice-president of this company, Fletcher Cowherd, Jr., made the same selection. His home on Morningside Drive has Kohler Ware in its five bathrooms and in its kitchen.

This beautiful ware has a special distinction, conferred by grace and dignity of design and by rare quality of enamel—always identified by the name "Kohler" faintly fused in the immaculately white surface. Yet it costs no more than any comparable ware:

It is a sound choice, this Kohler Ware, alike for the man who builds to keep and for him who builds to sell. There is genuine satisfaction in specifying it.

KOHLER CO., Founded 1873, KOHLER, WIS.
Shipping Point, Sheboygan, Wis. • Branches in Principal Cities



A Notable Community

The modern conception of the "city plan" is shaping the growth—in orderly beauty and civic purpose—of Kohler Village, where Kohler plumbing fixtures and private electric plants are made

KOHLER OF KOHLER

Plumbing Fixtures

He knows that it will work



H2370, a Combination of H952½ Mixometer Shower and Deshler Bath Fixture H2460

The one thing that every one says about Speakman Showers is that they ALWAYS work.

This is due possibly to the fact that Speakman Showers are made by a company which has had more than 56 years' experience in the plumbing industry and has always turned out a quality product.

We offer this experience to architects in any individual problem which they might meet and where they feel that we can help.

Loose-leaf catalog showing the entire Speakman line of showers and fixtures is available for your files, size 8½ x 10⅝".

SPEAKMAN COMPANY
WILMINGTON, - DELAWARE

SPEAKMAN SHOWERS

and FIXTURES

New Hotel Peabody, Memphis, Tenn.
 Architect: W. W. Alschlager
 Jobber: No. Nelson Mfg. Co.
 Plumbers: Hill Pibg. & Htg. Co.
 Equipped with 18-59 Ebony, Whale-Bone-It

Jung Hotel, New Orleans, La.
 Architects: Weiss & Dreyfous, Inc.
 Jobbers: Standard Sanitary Mfg. Co.
 Plumbers: Sciambra & Masino
 Equipped with 21-9 and 21-9 Ebony,
 Whale-Bone-It

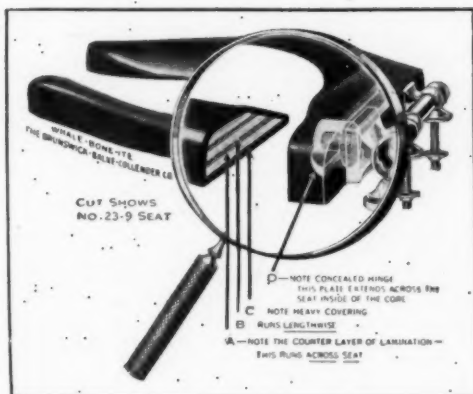


The ebony black, or rich mahogany finish of Whale-Bone-It seats affords a most pleasing contrast with the tile and trim of the bathroom or lavatory

Racquet Club, Chicago, Ill.

Architect: A. Rebert Jobbers: Standard Sanitary Mfg. Co.
 Plumbers: J. J. Daly Co. Equipped with 21-9 Ebony, Whale-Bone-It

3 Big Reasons for specifying Whale-Bone-It Toilet Seats



"The Seat of No Apologies"

1. Ten Exclusive Features, found in no other seats made:
 Permanent Durability Permanent Finish Comfortable
 Easiest Cleaned No Exposed Metal Non-Inflammable
 Acid-Proof Sanitary Non-Warping
 One-Piece Construction
2. The unqualified guarantee of the maker.
3. Their long trouble-less service, which makes them the most economical in long years of service.

WHALE-BONE-ITE DIVISION
 The Brunswick-Balke-Collender Co.
 623 South Wabash Avenue, Chicago



Reviews of Manufacturers' Publications

THE JOHN D. EMACK CO., Philadelphia. "The Charm of Slate Floors and Walks." A brochure on use of slate.

Probably because of its wide use for covering roof surfaces, the advantages of slate as a flooring material are frequently overlooked. Use of this material is productive of beautiful effects when it forms the flagging for verandas, terraces and garden walks, but perhaps even more distinguished is its appearance when it is used for paving interiors which are of a sufficiently simple and bold character, such as vestibules, halls, sun-porches, sometimes even for libraries, and often in shops or elsewhere.

This interesting booklet is devoted to describing and illustrating the slates marketed by this well known firm, —slates rough or finished, in such colors as black, gray, blue, purple, green and red, and of shapes irregular or cut into random rectangles; these last sometimes being finished with trimmed or frequently with chamfered edges.

BIRD & SON, Inc., East Walpole, Mass. "Bird's Roofs." A number of excellent publications on roofs.

In this interesting and helpful folder there is condensed all the information which an architect or builder is likely to require regarding the excellent line of asphalt shingles for which Bird & Sons, Inc. are so well and widely known. These shingles are to be had singly ("Proslate Individuals"), in twos ("American Twins"), or in fours ("American Fours or Proslate Fours"), and in quite a variety of excellent colors which long experience has proved to be useful for roofs. As all builders and most architects know, these shingles may be applied over old roofs of wood shingles, this making unnecessary the often costly removal of a wooden roof. Then too, use of these shingles when two or more are joined means use of fewer nails to hold them in place, the use of "American Twins" involving a saving of 36 per cent and of "American Fours" of 47 per cent.

INDIANA FLOORING CO., New York. "From Forest to Floor." An extremely useful work on floor surfacing.

Of all the materials used for flooring, wood is without doubt the most widely used, the variety of wooden floors being so great that a floor may be laid of the simplest and cheapest of planks, or else it may be inlaid or of "marquetry," and as intricate and costly as the taste may desire.

This carefully prepared and beautifully produced brochure deals with wooden floors of a high order,—floors laid of domestic as well as of imported woods, and in a great variety of patterns. These patterns are for the most part quite simple,—variations of "herringbone" or "basket weave" or different arrangements of small geometrical forms, but owing to the grain or figure of the woods used the effect is rich and beautiful without being either puzzling or confusing, qualities which should be avoided in designing floors. Many notable installations are illustrated.

ARTHUR TODHUNTER, 414 Madison Avenue, New York. "Early English Mantels." A work on their use.

Probably because the fireplace is the architectural center of focus of a room, the design of its mantel or chimney-piece determines its style and establishes its character. This fact is recognized by the firm issuing this brochure, and in view of the present trend toward the use of the different English styles in domestic architecture the booklet is useful for what it suggests and offers. It deals with excellent reproductions of various types of English chimneypieces or mantels, the very early and simple sort, consisting of a beam or "hearthtree," as it was called, practically a decorative lintel of wood or stone resting upon two vertical supports, or else the more fully developed mantel, architectural in form, and with supporting pilasters and sometimes with overmantels as well. These excellent reproductions are of different materials, and they also represent various English periods, from the Gothic to the late Renaissance.

W. M. RITTER LUMBER CO., Columbus, O. "Floor Beauty Depends on Timber Growth." Wood floors.

The importance of the floor and the materials of which it is made has increased considerably since the rise of the present custom of leaving floors uncovered or else of using upon them only a few rugs. Most architects doubtless have their own preferences on flooring for use in different places, but it may be said, broadly; that for domestic structures floors are for the most part of wood,—and probably they always will be. Wood possesses countless advantages, one being its wide range of cost from the most inexpensive to the most luxurious of woods; another advantage lies in the great variety the appearance of wood floors may be given, and another most important point in favor of wood is that it is comparatively comfortable to walk upon even in cold weather, lacking the chill sometimes possessed by other flooring substances. This publication supplies valuable data.

THE SANDUSKY CEMENT CO., Cleveland. "Medusa Waterproofed Portland Cement." A work on waterproofing.

Many of the ways in which concrete is being used necessitate that it possess qualities which render it waterproof. To make concrete which is waterproof and wholly impervious even to dampness, it is essential that suitable materials be mixed in correct proportions, and this booklet or brochure is devoted to making known the excellent qualities of Medusa Waterproofed Portland Cement as an ingredient for concrete and to giving directions for using it in concrete which shall be waterproof. When it is remembered that the success of much large work of many kinds requires that basements, sub-basements, exterior walls and other parts be absolutely proof against dampness, the importance of securing this quality will be quickly realized. This book gives ample data regarding this cement and complete specifications for its proper use in mixing.

I. P. FRINK, INCORPORATED, New York. "Art and Gallery Lighting." The necessity of proper lighting.

An important department of artificial lighting is that which has to do with art galleries and museums, important in that upon the success with which a gallery is lighted depends the pleasure to be derived from art treasures of great value. This booklet illustrates and describes the methods of gallery lighting practiced by this old and well established firm. The forms of lighting differ considerably, one form involving the placing of lights above a skylight or a glass ceiling, which of course means that the gallery is lighted in much the same way by day and by night, and another form involves the use of either an individual reflector for each painting in a gallery or of one continuous reflector which extends entirely around a room. Still another form is used when exhibition cases in museums or show cases in shops must be so arranged that lighting is concealed.

JOHNSON SERVICE COMPANY, Milwaukee. "Johnson System of Temperature and Humidity Control."

The automatic regulation of temperatures and air conditions, which adds so greatly to a building's serviceability, is the direct result of study and experiment which have been directed to the solution of the problem. The effort which has been devoted to obtaining what seems to be almost perfection in such service, and the means by which such perfect service is obtained are indicated in this brochure issued by the Johnson Service Company, explaining and illustrating its devices for use in controlling temperatures and humidity, appliances so perfectly geared and adjusted that they almost seem to function as of themselves.

This result, moreover, is secured at the least possible cost for fuel and upkeep, since the value of such apparatus is regulated largely by what it costs. The large amount of useful data regarding control of temperature and humidity which this brochure contains renders it of great value.



Guilford County Court
House, Greensboro, N.C.
Architect,
Mr. Harry Barton.

Approximately 20,000 Sq. Ft. of
ASBESTONE Flooring
installed.

Scientifically Made

Asbestone Flooring Chemically and Physically Tested

In the purchase of any article where quality is an important factor—and this applies with unusual force and effect to flooring—it is *good business* to ascertain the stability of the manufacturer. Where a concern, such as Franklyn R. Muller, Inc., has grown to be the largest of its kind, there must be sound reasons for the confidence that makes this growth possible. Be sure you are dealing with a responsible manufacturer if you would safeguard your clients' interests.

This is your protection.



Floor values to meet modern architectural standards must be exceptionally high. *Asbestone* Flooring is recommended by leading architects as the most economical flooring known to modern science. Every shipment is tested before it leaves the factory. It is the *only* standardized flooring of its kind.

It is practically indestructible, resisting the hardest wear for an indefinite period. It is guaranteed not to crack, contract or expand of its own volition. *Asbestone* is adaptable—can be laid at any angle; hygienic, fireproof, resilient, almost noiseless and non-slippery. It is made in single tones or in many color combinations.

Write for samples and prices

FRANKLYN R. MULLER, Inc.

1201 Madison Street
Waukegan, Illinois

Reviews and Announcements

NORTH WESTERN EXPANDED METAL CO., Chicago. "N. W. Expanded Metal Products." Metal lathing.

The various publications being issued by this large manufacturing concern have a high value for architects and builders in that they keep one fully posted as to the latest improvements and developments in the many products which the company markets and the most approved methods of using them. This particular publication, for example, illustrates and gives all necessary data concerning a wide variety of materials, since in addition to dealing with the now well known "Kno-Burn Metal Lath," "Plasta Saver," "Long Span," "Burial Vault" and other varieties of lathing, it deals with channels, corner beads and other accessories likely to be used with lath. All this is made plain by numerous diagrams and drawings of different kinds, while the specifications which are included are so complete that error in actual building would seem to be almost impossible. Interesting data are given regarding the best use of copper.

THE KAWNEER CO., Niles, Mich. "Kawneer Windows in Solid Nickel-Silver." A type of window which cannot rust.

This brochure contains data of every kind regarding the widely known windows manufactured and sold by the Kawneer Company. These windows are made of nickel-silver, a material which is non-rusting and which when oxidized by atmosphere assumes a beautiful olive green color. Their manufacture is by processes which miter or cope the metal members to a mathematically exact fit, securely welding every joint and giving the rigidity and snugness of fit which a serviceable window should possess without the use of bolts or rivets. The gauge of metal used is heavy, so that with ordinary usage the windows cannot be dented or warped. Kawneer windows are supplied in various forms,—casements or double-hung,—and with any desired number or arrangement of panes, and this brochure gives in the form of diagrams and drawings every detail of muntin, bar fastener or friction adjuster, several pages being devoted to giving the specifications for their proper use.

RICHARDSON & BOYNTON CO., New York. "The New Richardson Round Smokeless Boilers." Their utility.

The difficulty with which anthracite coal is obtained in some localities and the utter impossibility of securing it in others lends particular value to apparatus for the economical burning of soft coal, usually to be easily had. The main objection to the use of soft coal is of course the smoke and soot which it produces, but in addition to being objectionable, smoke represents actual waste, since it is really unburned fuel, wasted energy which gives no heat; *smoke represents money actually thrown away.* This brochure describes and illustrates the widely known Richardson Round Boiler, built upon a plan which since it means the turning into heat of every ounce of soft coal, eliminates smoke and consequent soot. The Richardson Round Boiler carries the O. K. of smoke-prevention societies and heating engineers. This booklet explains and illustrates the boiler, built upon a comparatively simple plan, and with no intricate parts to need repairs.

NATIONAL METAL MOLDING CO., Pittsburgh. "National Conduits." A brochure on conduit for wiring.

Conduit of one kind or another is quite necessary in electrical wiring of every kind. Insurance companies' rules of course prescribe its use for enclosing wires where they are concealed within walls, just as the same rules require the use of metal moulding for enclosing surface wires, thus doing away with wires on walls and ceilings which are unsightly as well as dangerous. Then, too, conduit is necessary where wires must be placed underground or embedded in such substances as concrete, and for these uses it is important to use conduit made of some material which will not rust, since the rusting of a conduit's surfaces, particularly its inner surfaces, means that if it becomes necessary to withdraw and replace the wires, it cannot be done, for the rust and scale will cut the insulation or else perhaps cause the choking of the conduit. This booklet describes the many kinds of conduit marketed by this company,—Sherarduct, Economy, Flexsteel, Flextube, etc., and all the accessories and details which the use of conduit involves.

DAVID LUPTON'S SONS CO., Philadelphia. "Lupton Casements of Copper-Steel." Catalog C-122.

So much has been published in magazines having to do with architecture, decoration, etc. regarding the advantages of using casement windows that it would seem their advantages were by this time thoroughly understood and fully appreciated. To keep architects and builders fully informed regarding the utility and excellence of its casements and the plan upon which they operate, as well as to give the details and measurements necessary for their proper specification, this large firm of manufacturers publishes this brochure. The term "copper-steel" may at first be puzzling, but it is here described as a strong, resistant alloy, admirably adapted to the manufacture of objects which must be exposed to weather. Lupton service, available at all the company's dozen or more sales offices, is offered freely to architects, engineers and builders, as is also the company's service to interior decorators in planning proper draperies.

CURTIS LIGHTING, Inc., New York, Chicago and Los Angeles. "Light." A brochure on lighting fittings.

The importance of lighting in connection with building of any kind lends interest to the fixtures by means of which light is distributed. There are, of course, a number of systems of lighting,—direct, semi-direct, indirect, etc.,—and for use with each the ingenuity and skill of manufacturers' designers have devised fittings which perform their work as fixtures besides aiding the architectural appearance of their surroundings. In this brochure a large manufacturing concern illustrates and describes the fixtures which it supplies, simple or elaborate, and made to hang from ceilings, be attached to walls, or to stand on floors or tables. The designs adapt the fixtures to buildings of all architectural styles, and because of the variety of types which it illustrates the publication would be of interest and value in the office of any architect. The services of Curtis Lighting, Inc., are offered to architects who may have need of them in solving special lighting problems which arise in practice.

S. Ralph Fetner announces his removal to 111 West Adams Street, Jacksonville, Fla., where he will be associated with Mellen C. Greeley.

Haskell H. Martin and William R. Ward, Jr., have terminated their partnership as Martin & Ward, but are continuing practice individually at Greenville, S. C.

Warren, Knight & Davis, of Birmingham, Ala., announce the opening of a branch office in the American National Bank Building, Pensacola, Fla., Chandler C. Yonge in charge.

Franklin Cox Stanton has opened offices for the practice of architecture in the Capital National Bank Building, Olympia, Washington. He would appreciate catalogs and samples of building materials from manufacturers.

Announcement is made of the dissolution of the architectural firm of Rose & Peterson, Kansas City, Kansas. W. W. Rose will continue practice at 432 Brotherhood Block, while D. B. Peterson has taken temporary quarters at 818 Minnesota Avenue, Kansas City, Kansas. Mr. Peterson would be glad to receive manufacturers' catalogs.

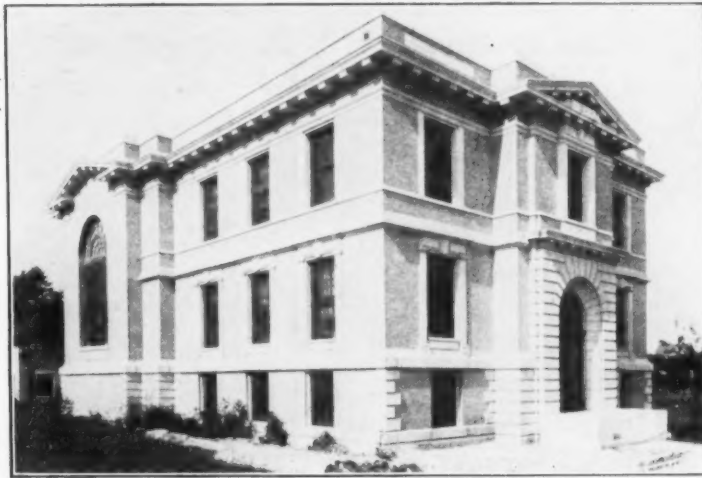
VAN RENSSELAER P. SAXE, C.E.

Consulting Engineer

**STRUCTURAL STEEL
CONCRETE CONSTRUCTION**

Knickerbocker Building

Baltimore



Commercial Cable Company Building at Far Rockaway, Long Island, N. Y. William Crawford, Builder

How the Commercial Cable Company keeps its walls damp-proof

IF it should rain for seven days and seven nights, no dampness can penetrate the walls of the Commercial Cable Company's building at Far Rockaway, Long Island.

The entire exterior wall surface of this building has been made absolutely waterproof and damp-proof by an application of Hydrocide Colorless. In addition to keeping the interior of the building warm and dry, this material preserves the natural beauty of the brickwork. Its presence on the exterior

surface of a wall can not be noted.

Hydrocide Colorless is a perfect waterproofing for brick walls. It can be applied in cold weather. It does not run in hot weather for it contains no paraffine. It collects no dust; it penetrates the brick; it can be painted; it is invisible.

Use this material on all your waterproofing jobs and you will have walls of which you can be permanently proud. Send for literature giving further details on Hydrocide Colorless.

Hydrocide Colorless Waterproofing

Other Sonneborn products

Lapidolith—The original concrete floor hardener. A liquid chemical that changes the floor surface to a fine dense crystalline structure of flint-like hardness. Hundreds of millions of feet of concrete floor have been Lapidolized in the leading industrial plants of the country.

Cemcoat—A paint that stays white longer than any similar paint; can be washed again and again; sticks to brick or concrete as easily as to wood; and usually requires one less coat. Made for both interiors and exteriors, in white and colors, and in gloss, eggshell, or flat enamel finish. Send for a free sample.

Lignophol—A preservative dressing for wood floors that penetrates and restores the natural oil and gum of the wood. Lignophol prevents rotting, splintering and drying out; it is not sticky; it can easily be washed; and does away with ordinary floor oils.

Stormtight—The famous semi-liquid compound for mending and preserving roofs. The thick, adhesive rubber-like material can be applied by anyone, over any kind of roof, and gives a tight new surface that lasts for years. Made in four beautiful colors. Mends a single leak or makes an entire roof watertight.

Index to Advertising Announcements

Acme Brick Company	10	Georgia Marble Company, The	20	New Jersey Wire Cloth Company	102
Adam Electric Company, Frank	150	Gillis & Geoghegan	84	New Jersey Zinc Company	21
Alberene Stone Company	16	Glidden Company, The	68	Nicholas Power Company	174
American Blower Company	137	Globe Ventilator Company	130	North Western Expanded Metal Co.	5
American Brass Company, The	89	Goder Incinerator Company	112	Norton Company	121
American Cement Tile Mfg. Co.	18	Goulds Manufacturing Co.	176		
American Face Brick Association	30, 31	Grinnell Company	104	O'Brien Varnish Company	78
American Laundry Machinery Co.	164	Guastavino Co., R.	7	Otis Elevator Company	84
American Lead Pencil Co.	64	Guth Company, The Edwin F.	116		
American Radiator Company	13, 135			Pacific Lumber Co., The	77
American Seating Company	60	Hamlin, Irving	40	Palmer Lime & Cement Co.	102
American Sheet and Tin Plate Co.	126	Hart & Hegeman	143	Peelle Company, The	151
American Stove Company	142	Hartmann Sanders Co.	80	Pfaudler Co., The	82
American Walnut Mfrs. Ass'n	58	Hauserman Co., The E. F.	41	Pittsburgh Reflector Company	113
Appalachian Marble Company	26	Heggie Simplex Boiler Corporation	9	Portland Cement Association	105
Armstrong Cork and Insulation Company	93, 120	Hess Warming & Ventilating Co.	130	Pratt & Lambert, Inc.	65
Armstrong Cork Co.	125	Holophane Glass Co.	117	Precision Machine Company	173
Art Metal Construction Company	156	Holrib, Inc.	129		
Associated Metal Lath Manufacturers, Inc.	32	Holtzer-Cabot Electric Co.	149	Ramp Buildings Corporation	11
Associated Tile Manufacturers	24	Hope & Sons, Henry	146	Raymond Concrete Pile Company	3
Athey Company	166	Horn Company, A. C.	177	Reading Iron Company	3rd Cover
Atlantic Insulated Wire and Cable Co.	106	Hydrex Asphalt Products Corp.	85	Reed Air Filter Company	25
Austral Window Co.	146			Richards Wilcox Mfg. Co.	2nd Cover
Automatic Electric Company	97	Illinois Engineering Company	197	Ritter Lumber Co., W. M.	83
		Imperial Brass Manufacturing Co., The	182	Roddis Lumber & Veneer Company	79
Barrett Company, The	124	Improved Office Partition Company	52	Rookwood Pottery Company, The	60
Batchelder-Wilson Company	19	International Nickel Co.	162	Rubberstone Corporation	118
Birch Manufacturers, The	82			Ruberoid Co., The	124
Bird & Son, Inc.	76	Jacobson Mantel & Ornament Co.	64	R. U. V. Co., Inc., The	168
Bishopric Manufacturing Co., The	50	Jenkins Bros.	186		
Bonded Floors Company	57	Johns-Manville, Inc.	132	Samson Cordage Works	114
Brasco Manufacturing Co.	107	Johnson Service Company	175	Sanymetal Products Co., The	40
Brunswick-Balke-Collender Co.	191			Sargent & Company	34
Bryant Heater & Mfg. Company	134	Karolith Corporation	147	Schumacher & Co., F.	59
Bull Dog Floor Clip Co.	148	Kawneer Co., The	109	Sherwin-Williams Co., The	72
		Kelsey Heating Company, The	131	Simplex Wire and Cable Co.	104
California White and Sugar Pine Mfrs. Ass'n	101	Kensington Mfg. Company	55	Smith & Egge Mfg. Co., The	176
Carey Co., The Philip	99	Kent-Costikyan Trading Company	60	Smyser-Royer Co.	114
Carlhan of Paris, Inc.	56	Kerner Incinerator Co., The	104	Sonneborn Sons, Inc., L.	195
Carter-Bloxonend Flooring Company	29	Kewanee Boiler Company	4	Southern Cypress Mfrs. Ass'n	80
Central Tube Co.	180	Kewanee Private Utilities Co.	112	Speakman Company	190
Chamberlin Metal Weather Strip Co.	157	Kewaunee Mfg. Co.	174	Spencer Turbine Company, The	130
Chase Metal Works	183	Keystone Roofing Manufacturing Company	127	Standard Conveyor Co.	165
Chicago Pump Co.	176	Kny-Scheerer Corporation of America	172	Standard Gas Equipment Corp'n	140, 141
Circle A Products Corporation	42	Kohler Company	189	Standard Heater Company	133
Clinton Metallic Paint Co.	40	Koven, L. O. & Bro.	167	Stone & Webster, Inc.	23
Clow & Sons, James B.	95			Straus & Co., S. W.	86
Columbia Mills, Inc.	47	Lehigh Portland Cement Company	103	Toch Bros., Inc.	78
Compound & Pyrono Door Co., The	152	Long-Bell Lumber Co., The	81	Todhunter, Arthur	76
Concrete Engineering Co., The	6	Louisville Cement Co.	28	Trane Company, The	187
Corbin, P. & F.	38	Ludowici-Celadon Company, The	35	Trenton Potteries Co.	185
Crittall Casement Window Company	148	Lupton's Sons Company, David	153	Truscon Steel Co.	2
Curry & Co., H. Douglas	62			Turner Construction Company	48
Curtis Company	80	MacBeth-Evans Glass Co.	115	Tuttle & Bailey Mfg. Co.	62
Curtis Lighting, Inc.	112	Martin Varnish Co.	74		
Cutler Mail Chute Co.	102	Massillon Steel Joist Company	4th Cover	United States Gypsum Company	36
		Master Builders Company, The	123	United States Mineral Wool Co.	114
De Long Furniture Company	64	McKinney Mfg. Company	33	United States Radiator Corporation	138
Detroit Show Case Company	108	Metropolitan Electric Mfg. Co.	146	United States Rubber Co.	119
Detroit Steel Products Company	154, 155	Miller & Co., G. L.	171		
Devoe & Reynolds	75	Milwaukee Corrugating Co.	163	Valentine & Company	69
Dixon Crucible Co., Joseph	73	Mississippi Wire Glass Co.	78	Van Range Co., The John	139
Dougherty & Sons, W. F.	84	Mount & Robertson, Inc.	39	Van Zile Ventilating Co.	124
Douglas Company, The John	184	Mueller Company	132	Vonnegut Hardware Co.	37
Duraflex Company, The	122	Muller, Inc., Franklyn R.	193		
		Murphy Door Bed Co., The	63	Wallace & Tiernan Co.	169
Eagle-Picher Lead Company	67, 70	Murphy Vardish Company	71	Wallpaper Mfr's Ass'n	61
Eljer Company	198			Warren Webster & Co.	159
Excelso Specialty Works	174	Nash Engineering Co.	17	Western Brick Company	82
		National Fire Proofing Company	1	Western Electric Company	132
Federal Cement Tile Company	170	National Lead Company	66	Wheeling Corrugating Corp.	160, 161
French & Co., Samuel H.	62	National Metal Molding Co.	181	Whiting-Adams Company	76
Fulton Company, The	91	National Mortar & Supply Co.	110, 111	Williams Slate Co., J. W.	128
		National Terra Cotta Society	22	Wilmot Castle Co.	27
Galassi Company, The	118	National Tube Co.	178	Wilson Corporation, The J. G.	158
General Electric Company	144, 145	Nelson Corp., The H. W.	136		
General Fireproofing Company	8, 179	Never Split Seat Company	188	Zenitherm Company	12
				Zouri Drawn Metals Co.	14, 15

○ DENOTES SALES OFFICES

**OVER ALL THE U.S.A.
ILLINOIS HEATING SYSTEMS
MAKE WARM FRIENDS**

“WARM FRIENDS” are made as a result of a service rendered. Illinois’ “Warm Friends” are the result of Service plus a better product. Illinois Heating Systems have earned a reputation for Quality and Satisfaction during their 25 years of technical and practical leadership in the heating field.

The proof of this is contained in the fact that many of the outstanding buildings in the United States are equipped with Illinois Heating Systems.

Bulletin No. 21 will give you more reasons—it will be sent free on request.

1900

TWENTY-FIVE YEARS
EXPERIENCE RESULTS

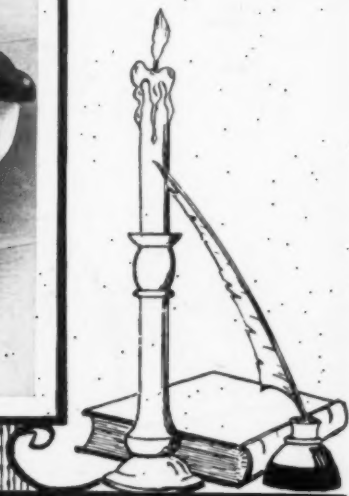
1925

ILLINOIS ENGINEERING COMPANY

ROBT. L. GIFFORD, PRES.

INCORPORATED 1900

BRANCHES AND REPRESENTATIVES IN 40 CITIES
CHICAGO



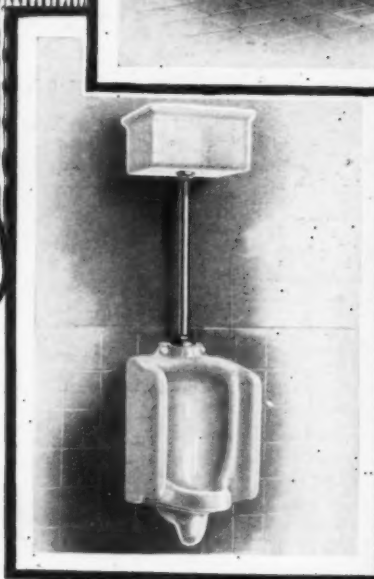
Quality Plumbing for

College and University Buildings

Such institutions demand fixtures of the highest quality, the most sanitary types and most durable materials.

Those shown combine all these points and are particularly adapted for this class of work.

Space does not permit detailed description but catalogues and literature giving complete information and showing our complete line will be gladly sent on request.



Sales offices in most of the principal cities thru-out the country

FORD CITY, PA.

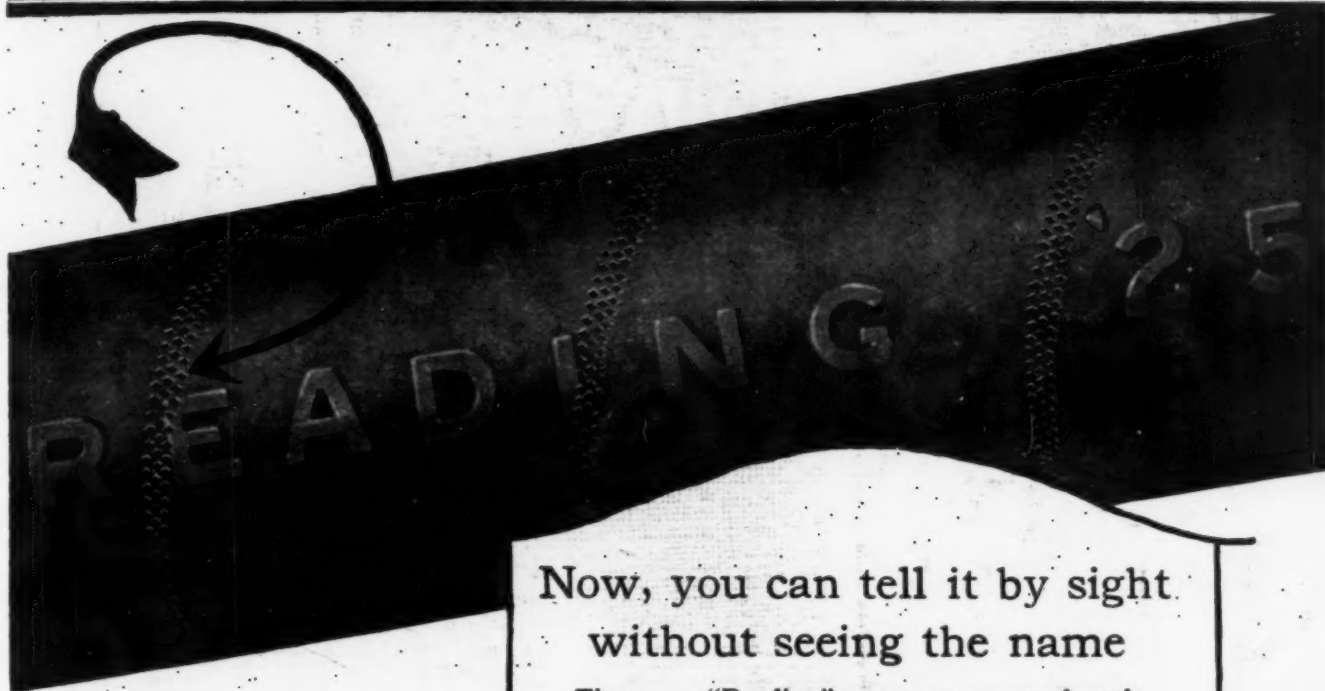
ELJER CO.

CAMERON, W. VA.

RECOGNIZED FOR MANY YEARS AS MAKERS OF THE FINEST VITREOUS CHINA PLUMBING FIXTURES

READING PIPE

GENUINE WROUGHT IRON



In the darkest corner a man with a flashlight can instantly identify "Reading."



Even on the shortest length "Reading" identification is instant and positive.

Now, you can tell it by sight
without seeing the name

The name "Reading" appears on every length of Reading Genuine Wrought Iron Pipe—and thousands look for it. But sometimes the pipe is so placed that the name isn't easy to find—or cut so short that it can't be found.

Now you can be *sure* at all times, under all conditions, that the pipe which you *paid for* as "Reading" is "Reading"—*without even seeing the name.*

The new Spiral Knurled Mark assures positive, easy identification—a big advantage to you, and a big time saver for the man who checks up on the specifications.

An installation of Reading Genuine Wrought Iron Pipe indeed costs but a fraction more than the cheaper steel pipe, but its added years of service make it a sound, economical investment. Specify "Reading" and look for the Spiral Knurled Mark.

READING IRON COMPANY
Reading, Pa.

World's Largest Manufacturers of Genuine Wrought Iron Pipe

Boston
Philadelphia
Seattle
Dallas

Pittsburgh
Chicago
New York
San Francisco

Baltimore
Cincinnati
Los Angeles
St. Louis

Economical Fireproof Floors For Colleges and Schools



*Massillon Bar Joists in place
in St. Joseph's school,
Decatur, Ind. Herman J.
Graul, Architect. Chas. N.
Christen & Co., Contractors*

The numerous casualties resulting from fires in college and school buildings should prompt every architect to see that the floors of such buildings are designed fireproof. College and school fireproof floors can be built with the greatest measure of economy and safety with Massillon Bar Joists. They provide light weight, easily and quickly constructed

floor panels that reflect economies in footings, columns and supporting members as well as in the amount of material to be handled and transported. Furthermore, Massillon Bar Joists facilitate piping and conduit installations. They are made in 18 standard sizes meeting every span and load requirement. Send for descriptive literature.

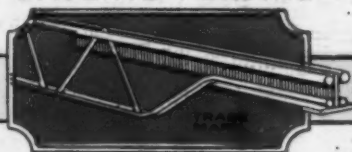
THE MASSILLON STEEL JOIST COMPANY, Canton, Ohio

Plants at Massillon and Canton, Ohio

MASSILLON

● **BAR** PATENTS PENDING **JOISTS**

TWIN BARS BOTH TOP AND BOTTOM



SOLID STEEL ARC WELDED CONNECTIONS

PRINTED IN U. S. A.

CHARLES FRANCIS PRESS, NEW YORK

